PTO-1542
(4-85)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE

1-461

ONLINE SEARCH REQUEST FORM

****

USER FONDA SERIAL NUMBER 08/063181

ART UNIT 1803 PHONE 308-1620 DATE 1-31-95

Please give a detailed statement of requirements. Describe as specifically as possible the subject matter to be searched. Define any terms that may have special meaning. Give examples or relevant citations, authors, or keywords, if known.

You may include a copy of the broadest and or relevant claim(s).

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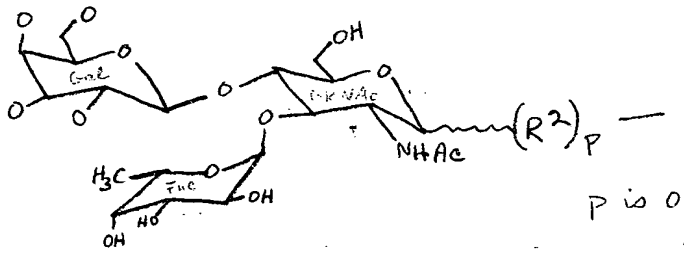
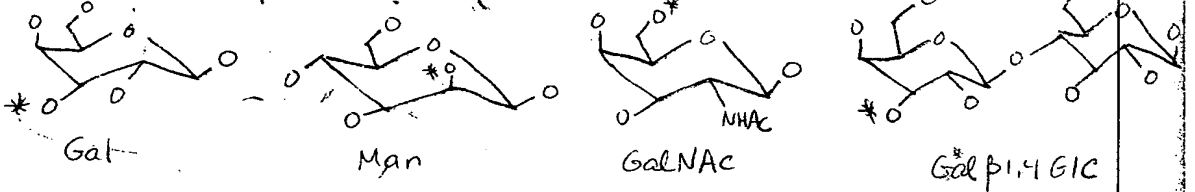
JAN — Please search attached claims 67 and 68. The core structure for claim 68 (Gal β1,4 (Fuc α1,3) GlcNAc) is:



p is 0 or 1

Note that the next to last line of claim 68 constrains R^2 to be attached at the 1-position, as shown. However, there is no such limitation about where R' is attached to Gal.

Here are the possibilities for R^2:



The starred positions show where R^2 must attach to the core structure. The claims allow for R^2 to be absent, or also for R^2 to be further substituted. If necessary you may constrain the further substitution on R^2 to be a substitutable ring of carbon and oxygen. For the case in which R^2 is absent, you may limit what is attached in its place to oxygen bonded to a substitutable ring of carbon and oxygen, if needed.

The method may be used to treat metastasis, or inflammation associated with septic shock, wound sepsis, acute respiratory distress syndrome (ARDS). The compound may be embedded in a liposome. The selectin receptor may be E-Selectin or P-Selectin. The adhesion which is mediated may be that of a leukocyte, monocyte, or neutrophil to an endothelial cell.

Inventors: James C. PAULSON, Mary S. PEREZ, Federico C.A. GAETA, and Robert M. RATCLIFFE

****

STAFF USE ONLY

COMPLETED 2/9/95
SEARCHER
ONLINE TIME 50 (in minutes) TOTAL TIME 1:3
NO. OF DATABASES 5

SYSTEMS
✓ CAS ONLINE
___ DARC/QUESTEL
___ DIALOG
___ SDC
___ OTHER

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=> fil wpids
FILE 'WPIDS' ENTERED AT 07:58:39 ON 09 FEB 95
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FILE LAST UPDATED: 07 FEB 95                <950207/UP>
>>>UPDATE WEEKS:
MOST RECENT DERWENT WEEK             9505   <199505/DW>
DERWENT WEEK FOR CHEMICAL CODING:    9442
DERWENT WEEK FOR POLYMER INDEXING:   9501
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE
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      >>> TIMELINESS OF UPDATING IMPROVED - SEE NEWS <<<

=> d 1-2 std abs

L12  ANSWER 1 OF 2  COPYRIGHT 1995 DERWENT INFORMATION LTD
AN   92-024188 [03]   WPIDS
CR   92-024187 [03]
DNC  C92-010421
TI   Compsns. for controlling inflammation - contg. fucosyl
     polysaccharide from Streptococcus, useful in treatment of
     respiratory distress syndrome, septic shock, etc..
DC   B04 B07
IN   GAETA, F C; PAULSON, J C; PEREZ, M S;
   RATCLIFFE, R M; GAETA, F C A
PA   (CYTE-N) CYTEL CORP
CYC  33
PI   WO 9119502  A  911226 (9203)*
        RW: AT BE CH DE DK ES FR GB GR IT LU NL OA SE
         W: AT AU BB BG BR CA CH DE DK ES FI GB HU JP KP KR LK LU MC MW
            NL NO PL RO SD SE SU
     FI 9205668  A  921214 (9310)                A61K000-00
     EP 533834   A1 930331 (9313)  EN            A61K031-70
         R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
     NO 9204830  A  930208 (9318)                A61K031-70
     JP 05507519 W  931028 (9348)       36 pp    C08B037-00
ADT  FI 9205668 A WO 91-US4284 910614, FI 92-5668 921214; EP 533834 A1 EP
     91-912402 910614, WO 91-US4284 910614; NO 9204830 A WO 91-US4284
     910614, NO 92-4830 921214; JP 05507519 W JP 91-511934 910614, WO
     91-US4284 910614
FDT  EP 533834 A1 Based on WO 9119502; JP 05507519 W Based on WO 9119502
PRAI US 90-538853   900615; US 90-619319   901128; US 90-632390   901221;
     WO 91-US3592   910522
IC   ICM  A61K031-70; C08B037-00
     ICS  A61K037-02; A61K037-20; A61K039-395; A61K047-48
AN   92-024188 [03]   WPIDS
CR   92-024187 [03]
AB   WO 9119502 A   UPAB: 940120
     Compsns. contg. a cpd. (I) which selectively binds to a selectin
     receptor is claimed where (I) contains one or more gps. of formula.
```

R1-Gal-beta-1,4-(Fuc-alpha-1,3)-GlcNAc-(R2)a- (Ia)
where R1 = an oligosaccharide (residue) or R3-R4-C(CO2H)- (sic); R3 and R4 = H, 1-8C alkyl, 1-8C hydroxyalkyl, aryl(1-8C)alkyl or alkoxy(1-8C)alkyl; R2 = beta-1,3-Gal, alpha-1,2-Man or alpha-1,6-GalNac; and a = 0 or 1.

USE - Compsns. (A), (C) and (D) may be used to treat inflammatory or other disorders associated with selectin-mediated cellular adhesion. Compsns. (B) may be used for targetted delivery of drugs, esp. antiinflammatory agents or antioxidants. Conditions that may be treated include arthritis, reperfusion injury, frost bite, adust respiratory distress syndrome, asthma, traumatic or septic shock, nephritis, psoriasis, dermatitis, inflammatory bowel disease, atherosclerosis, thrombosis and tumour metastasis. @(107pp Dwg.No.0/11

ABEQ JP05507519 W UPAB: 940120
Compsns. contg. cpd. (I) which selectively binds to a selectin receptor is claimed where (I) contains one or more gps. of formula R1-Gal-beta-1,4-(Fuc-alpha -1,3)-GlcNAc-(R2)a- (Ia) where R1 = an oligosaccharide (residue) or R3-R4-C(CO2H)- (sic); R3 and R4 = H, 1-8C alkyl, 1-8C hydroxyalkyl, aryl (1-8C) alkyl or alkoxy (1-8C) alkyl; R2 = beta-1,3-Gal, alpha-1,2-Man or alpha-1,6-GalNac; and a = 0 or 1.

USE - Compsns. (A), (C) and (D) may be used to treat inflammatory or other disorders associated with selectin-mediated cellular adhesion. Compsns. (B) may be used for targetted delivery of drugs, esp. antiinflammatory agents or antioxidants. Conditions that may be treated include arthritis, reperfusion injury, frost bite, adjust respiratory distress syndrome, asthama, traumatic or septic shock, nephritis, psoriasis, dermatitis, inflammatory bowel disease, atherosclerosis, thrombosis and tumour metastasis.

L12 ANSWER 2 OF 2 COPYRIGHT 1995 DERWENT INFORMATION LTD
AN 92-024187 [03] WPIDS
CR 92-024188 [03]
DNC C92-010420
TI New selectin binding oligosaccharide ligands for pharmaceuticals - inhibit inflammatory disease e.g. asthma, psoriasis and are used in diagnosis in liposome(s).
DC B04 B07
IN **GAETA, F C A; PAULSON, J C; PEREZ, M S**
; **RATCLIFFE, R M; GAETA, F C**; PHILLIPS, M L;
THOMSON, D S
PA (CYTE-N) CYTEL CORP
CYC 36
PI WO 9119501 A 911226 (9203)*
RW: AT BE CH DE DK ES FR GB GR IT LU NL OA SE
W: AT AU BB BG BR CA CH DE DK ES FI GB HU JP KP KR LK LU MC MG MW NL NO PL RO SD SE SU
AU 9180077 A 920107 (9217)
AU 9181029 A 920107 (9217)
ZA 9104557 A 920325 (9218) 102 pp
EP 533834 A1 930331 (9313) EN A61K031-70
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
NO 9204830 A 930208 (9318) A61K031-70

BR 9106556 A 930601 (9326) A61K031-70
JP 05507923 W 931111 (9350) 29 pp A61K045-00
NZ 238556 A 940126 (9407) C08L005-00
ADT ZA 9104557 A ZA 91-4557 910614; EP 533834 A1 EP 91-912402 910614, WO 91-US4284 910614; NO 9204830 A WO 91-US4284 910614, NO 92-4830 921214; BR 9106556 A BR 91-6556 910614, WO 91-US4284 910614; JP 05507923 W JP 91-510983 910522, WO 91-US3592 910522; NZ 238556 A NZ 91-238556 910614
FDT EP 533834 A1 Based on WO 9119502; BR 9106556 A Based on WO 9119501; JP 05507923 W Based on WO 9119501
PRAI US 90-538853 900615; US 90-619319 901129; US 90-632390 901221; WO 91-US3592 910522
IC ICM A61K031-70; A61K045-00; C08L005-00
ICS A61K031-715; A61K037-02; A61K037-20; A61K039-00; A61K047-48; G01N033-566
AN 92-024187 [03] WPIDS
CR 92-024188 [03]
AB WO 9119501 A UPAB: 940120
Compsns. contain, apart from a carrier, (a) a cpd. (I) contg. a selectin-binding oligosaccharide residue (OR) or (b) an immunoglobulin (Ig) to bind selectively an oligosaccharide ligand (Li) recognised by a selectin cell-surface receptor.
USE/ADVANTAGE - Used to inhibit selectin-mediated intra-cellular adhesion of inflammatory disease (e.g, reperfusion injury, asthma, psoriasis, septic shock or nephritis) or metastasis. Also used, e.g, when included in liposomes, to target other therapeutic agents or when labelled for diagnostic in vitro imaging. Admin. intravenously, orally or as an aerosol, pref. at a daily dose of 5-200 mg (I). @(101pp)@

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=> fil hca
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'OBI' IS DEFAULT SEARCH FIELD FOR 'HCA' FILE

=> d l13 1-2 bib abs ind

L13 ANSWER 1 OF 2 HCA COPYRIGHT 1995 ACS
AN 116:228245 HCA
TI Selectin-binding intercellular adhesion mediators for pharmaceuticals
IN Paulson, James C.; Perez, Mary S.; Gaeta, Federico C. A.; Ratcliffe, Robert Murray
PA Cytel Corp., USA
SO PCT Int. Appl., 108 pp.
CODEN: PIXXD2
PI **WO 9119502 A1** 911226

DS W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, PL, RO, SD, SE, SU
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG
AI WO 91-US4284 910614
PRAI US 90-538853 900615
US 90-619319 901128
US 90-632390 901221
WO 91-US3592 910522
DT Patent
LA English
OS MARPAT 116:228245
AB Compns. and methods for reducing or controlling inflammation and for treating inflammatory disease processes and other pathol. conditions mediated by selectin-mediated intercellular adhesion are disclosed. The pharmaceutical compns. comprise a carrier and compds. which selectively bind selectin, e.g. biomols. contg. R1Gal.beta.1,4(Fuc.alpha.1,3)GlcNAcR2a [R1 = oligosaccharide, R3R4C(CO2H); R3, R4 = H, C1-8 alkyl, hydroxyl C1-8 alkyl, aryl C1-8 alkyl, alkoxy C1-8 alkyl; R2 = .beta.1,3Gal, .perp.,2Man, .alpha.1,6GalNAc; a = 0,1]. Rats were protected from endotoxic shock by treatment with monoclonal antibody P6E2 to human ELAM-1 protein.
IC ICM A61K031-70
ICS A61K037-02; A61K039-00; A61K037-20
CC 1-7 (Pharmacology)
Section cross-reference(s): 15, 63
ST selectin intercellular adhesion inhibition; inflammation inhibitor selectin binding oligosaccharide; endotoxic shock monoclonal antibody ELAM1; protein ELAM1 antibody endotoxic shock; pharmaceutical selectin binding oligosaccharide
IT Endothelium
(cell of, leukocyte or monocyte adhesion to, inhibition of, with selectin-binding compds.)
IT Monocyte
Neutrophil
(endothelial cell adhesion to, inhibition of, with selectin-binding compds.)
IT Lipopolysaccharides
(endotoxic shock from, protection from, in rat, with monoclonal antibody P6E2 to human ELAM-1 protein)
IT Polysaccharides, compounds
(fucosylated type Ia, selectin-binding, of Group B Streptococcus, pharmaceutical contg.)
IT Escherichia coli
(lipopolysaccharide of, endotoxic shock from, protection from, in rat, with monoclonal antibody P6E2 to human ELAM-1 protein)
IT Analysis
(of compds. inhibiting selectin-mediated cellular adhesion, selectin binding inhibition in)
IT Pharmaceutical dosage forms
(of selectin-binding compds.)
IT Blood platelet
(selectin on, oligosaccharide binding, for pharmaceuticals)

IT Inflammation inhibitors
(selectin-binding compds.)
IT Leukocyte
(selectin-binding oligosaccharide expressed by, Igs to, for pharmaceuticals)
IT Ligands
(selectin-binding oligosaccharide, Igs to, for pharmaceuticals)
IT Gangliosides
Oligosaccharides
Proteins, specific or class
Sphingolipids
Lipids, biological studies
Polysaccharides, biological studies
(selectin-binding, for pharmaceuticals)
IT Immunoglobulins
(to selectin-binding oligosaccharide, for pharmaceuticals)
IT Respiratory distress syndrome
(treatment of acute, with compd. binding selection)
IT Sepsis and Septicemia
(treatment of wound-assocd., with compd. binding selection)
IT Polysaccharides, compounds
(type II, selectin-binding, of Group B Streptococcus, pharmaceutical contg.)
IT Polysaccharides, compounds
(type III, selectin-binding, of Group B Streptococcus, pharmaceutical contg.)
IT Glycopeptides
(with selectin-binding oligosaccharide, for pharmaceuticals)
IT Golgi apparatus
(.alpha.1,3-fucosyltransferase isolation from)
IT Glycoproteins, specific or class
(ELAM-1 (endothelial leukocyte adhesion mol. 1), oligosaccharide binding, for pharmaceuticals)
IT Glycoproteins, specific or class
(GMP-140 (.alpha.-granule membrane protein, 140,000-mol.-wt.), oligosaccharide binding, for pharmaceuticals)
IT Animal cell line
(HL-60, intercellular adhesion between activated HUVEC cells and, inhibition of, with monoclonal antibodies to sialylated Lex)
IT Animal cell line
(HUVEC, activated, intercellular adhesion between HL-60 cells and, inhibiton of, with monoclonal antibodies to sialylated Lex)
IT Adhesion
(bio-, selectin-mediated, inhibition of, with compd. binding selectin)
IT Molecules
(biochem., selectin-binding, for pharmaceuticals)
IT Carbohydrates and Sugars, compounds
(conjugates, inhibiting selectin-mediated cellular adhesion, detn. of, selectin binding inhibition in)
IT Amino acids, compounds
Glycolipids
Glycoproteins, specific or class
(conjugates, with selectin-binding oligosaccharide, for

pharmaceuticals)
IT Newborn
(disorder, respiratory distress syndrome, treatment of acute, with compd. binding selection)
IT Blood vessel, composition
(endothelium, cell of, selectin receptor on, oligosaccharide binding, for pharmaceuticals)
IT Shock
(endotoxin, protection from, in rat, with monoclonal antibody P6E2 to human ELAM-1 protein)
IT Streptococcus
(group B, selectin-binding polysaccharides of, pharmaceutical contg.)
IT Pharmaceutical dosage forms
(liposomes, selectin-binding compds. on)
IT Neoplasm inhibitors
(metastasis, selectin-binding compds. as)
IT Antibodies
(monoclonal, to sialylated Lex, intercellular adhesion between activated HUVEC cells and HL-60 cells inhibition with)
IT Peptides, biological studies
(oligo-, selectin-binding, for pharmaceuticals)
IT Glycoproteins, specific or class
(selectins, compds. binding, for pharmaceuticals)
IT Shock
(septic, treatment of, with compd. binding selectin)
IT 52720-51-1, Endo-.beta.-galactosidase
(HL-60 cells treatment with, activated blood platelets response to)
IT 56-41-7, Alanine, biological studies 60-18-4, Tyrosine, biological studies 60-18-4D, Tyrosine, radioiodinated
(glycooligopeptide contg. selectin-binding oligosaccharide and, for pharmaceuticals)
IT 140936-84-1
(homopolymers of selectin-binding polysaccharide contg., pharmaceutical contg.)
IT 90327-80-3 92480-43-8
(liposomes contg., intercellular adhesion between activated HUVEC cells and HL-60 cells inhibition with)
IT 73201-40-8, Lex
(monoclonal antibodies to, intercellular adhesion between activated HUVEC cells and HL-60 cells inhibition with)
IT 140938-81-4
(neutrophils binding to activated blood platelets inhibition with)
IT 141175-62-4 141175-63-5 141175-64-6
(neutrophils binding to activated blood platelets inhibition with liposomes contg.)
IT 96119-72-1 141175-61-3
(neutrophils binding to activated blood platelets response to liposomes contg.)
IT 39279-34-0
(oligosaccharide fucosylation with, in selectin-binding compd. prepn.)

IT 53-86-1, Indomethacin 22204-53-1, Naproxen 24280-93-1, Mycophenolic acid 59865-13-3, Cyclosporin A 104987-11-3, FK-506
(selectin-binding oligosaccharide on liposome encapsulating)
IT 56-87-1D, L-Lysine, oligosaccharide conjugates 70-26-8D, Ornithine, oligosaccharide conjugates 70-47-3D, Asparagine, oligosaccharide conjugates 110-85-0D, Piperazine, oligosaccharide conjugates 305-62-4D, oligosaccharide conjugates 498-56-6D, Homolysine, oligosaccharide conjugates 505-66-8D, Homopiperazine, oligosaccharide conjugates 13184-13-9D, oligosaccharide conjugates 71292-18-7D, oligosaccharide conjugates
(selectin-binding, for pharmaceuticals)
IT 98603-84-0 140913-62-8 140913-63-9 140913-64-0 140913-65-1 140913-66-2 140913-67-3 140913-68-4 140913-69-5 140913-70-8 141024-33-1 141042-38-8
(selectin-binding, pharmaceutical liposome compn. contg.)

L13 ANSWER 2 OF 2 HCA COPYRIGHT 1995 ACS
AN 116:228244 HCA
TI Selectin-binding intercellular adhesion mediators for pharmaceuticals, and assays for the agents
IN Paulson, James C.; Perez, Mary S.; Gaeta, Federico C. A.
PA Cytel Corp., USA
SO PCT Int. Appl., 102 pp.
CODEN: PIXXD2
PI **WO 9119501 A1** 911226
DS W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, PL, RO, SD, SE, SU
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG
AI WO 91-US3592 910522
PRAI US 90-538853 900615
US 90-619319 901128
US 90-632390 901221
DT Patent
LA English
OS MARPAT 116:228244
AB Selectin-mediated intercellular adhesion is inhibited by administration of compns. comprising selectin-binding oligosaccharides, e.g. R1Gal.beta.1,4(Fuc.alpha.1,3)GlcNAc.beta.1R2 (R1 = NeuAc.alpha.2,3, NeuGc.alpha.2,3, NeuAc.alpha.2,3Gal.beta.1,4GlcNac.beta.1,3, NeuGc.alpha.2,3Gal.beta.1,4GlcNAc.beta.1,3; R2 = 1,3.beta.Gal, 1,2.alpha.Man, 1,6.alpha.GalNAc), or Igs selectively binding an oligosaccharide ligand recognized by a selectin cell surface receptor. An inflammatory disease process mediated by a selectin cell surface receptor is treated by administering a biomol. having an oligosaccharide capable of selectively binding the cell surface receptor. Assays for test compds. inhibiting selectin-mediated cellular adhesion are also disclosed. Monoclonal antibodies to sialylated Lex blocked the ELAM-1 protein-mediated adhesion of HL-60 cells to interleukin 1.beta.-stimulated HUVEC cells. Liposomes contg. glycolipids having terminal sequences of sialylated di-Lex inhibited adhesion of HL-60 cells to activated endothelial cells at 4.degree..

IC ICM A61K031-70
ICS A61K031-715; A61K039-00
CC 1-7 (Pharmacology)
Section cross-reference(s): 15, 63
ST selectin intercellular adhesion inhibition; Ig oligosaccharide binding selectin; inflammation inhibitor selectin binding oligosaccharide; sialylated Lex antigen cell adhesion; liposome selectin binding oligosaccharide
IT Monocyte
Neutrophil
(adhesion of, to endothelial cell, inhibition of, with selectin-binding compds.)
IT Endothelium
(cell of, leukocyte or monocyte adhesion to, inhibition of, with selectin-binding compds.)
IT Analysis
(of compds. inhibiting selectin-mediated cellular adhesion, selectin binding inhibition in)
IT Bioassay
(of compds. inhibiting selectin-mediated cellulas adhesion, cell bearing selectin in)
IT Pharmaceutical dosage forms
(of selectin-binding oligosaccharides)
IT Inflammation inhibitors
(pharmaceutical liposome encapsulating, selectin-binding oligosaccharide on)
IT Blood platelet
(selectin on, oligosaccharide binding, for pharmaceuticals)
IT Sialic acids
(selectin-binding oligosaccharide contg., pharmaceutical contg.)
IT Leukocyte
(selectin-binding oligosaccharide expressed by, Igs to, for pharmaceuticals)
IT Glycolipids
Glycoproteins, specific or class
Oligosaccharides
Polysaccharides, biological studies
(selectin-binding, for pharmaceuticals)
IT Immunoglobulins
(to selectin-binding oligosaccharide, for pharmaceuticals)
IT Psoriasis
(treatment of, with selectin-binding compds.)
IT Golgi apparatus
(.alpha.1,2-fucosyltransferase I isolation from)
IT Glycoproteins, specific or class
(ELAM-1 (endothelial leukocyte adhesion mol. 1), oligosaccharide binding, for pharmaceuticals)
IT Glycoproteins, specific or class
(GMP-140 (.alpha.-granule membrane protein, 140,000-mol.-wt.), oligosaccharide binding, for pharmaceuticals)
IT Animal cell line
(HL-60, intercellular adhesion between activated HUVEC cells and, inhibition of, with monoclonal antibodies to sialylated Lex)
IT Bronchodilators

(antiasthmatics, selectin-binding compds.)
IT Adhesion
(bio-, selectin-mediated, inhibition of, with selectin-binding compds.)
IT Oligosaccharides
(conjugates, selectin-mediated cellular adhesion inhibition by, detn. of, selectin binding inhibition assay in)
IT Amino acids, compounds
(conjugates, with selectin-binding oligosaccharide, for pharmaceuticals)
IT Glycoproteins, specific or class
Proteins, specific or class
(conjugates, with selectin-binding oligosaccharides, for treatment of selectin-mediated inflammatory disease)
IT Blood vessel
(endothelium, cell of, selectin on, oligosaccharide binding, for pharmaceuticals)
IT Polysaccharides, biological studies
(fucose-contg., of Group B Streptococcus, selectin-binding, for pharmaceuticals)
IT Streptococcus
(group B, fucosylated polysaccharide of, selectin-binding, for pharmaceuticals)
IT Pharmaceutical dosage forms
(liposomes, selectin-binding oligosaccharide on)
IT Neoplasm inhibitors
(metastasis, selectin-binding compds.)
IT Antibodies
(monoclonal, to sialylated Lex, intercellular adhesion between activated HUVEC cells and HL-60 cells inhibition with)
IT Kidney, disease
(nephritis, treatment of, with selectin-binding compds.)
IT Glycoproteins, specific or class
(selectins, oligosaccharides binding, for pharmaceuticals)
IT Shock
(septic, treatment of, with selectin-binding compds.)
IT Shock
(traumatic, treatment of, with selectin-binding compds.)
IT 52720-51-1, Endo-.beta.-galactosidase
(HL-60 cells treatment with, activated blood platelets response to)
IT 98603-84-0
(antibody to, for pharmaceuticals)
IT 56-41-7, Alanine, biological studies 60-18-4, Tyrosine, biological studies 60-18-4D, Tyrosine, radioiodinated
(glycooligopeptide contg. selectin-binding oligosaccharide and, for pharmaceuticals)
IT 140913-64-0D, conjugates 140913-67-3D, conjugates
(inflammatory disease treatment with, selectin-mediated)
IT 56093-23-3
(isolation of, from Golgi app.)
IT 59865-13-3, Cyclosporin A
(liposome encapsulating, selectin-binding oligosaccharide on)
IT 90327-80-3 92480-43-8

(liposomes contg., intercellular adhesion between activated HUVEC cells and HL-60 cells inhibition with)
IT 73201-40-8, Lex
(monoclonal antibodies to, intercellular adhesion between activated HUVEC cells and HL-60 cells inhibition with)
IT 140938-81-4 141175-62-4 141175-63-5 141175-64-6
(neutrophils binding to activated blood platelets inhibition with)
IT 96119-72-1 141175-61-3
(neutrophils binding to activated endothelium cells response to)
IT 2438-80-4, Fucose
(selectin-binding oligosaccharide contg., pharmaceutical contg.)
IT 56-87-1D, L-Lysine, oligosaccharide conjugates 70-26-8D, Ornithine, oligosaccharide conjugates 70-47-3D, Asparagine, oligosaccharide conjugates 110-85-0D, Piperazine, oligosaccharide conjugates 305-62-4D, oligosaccharide conjugates 498-56-6D, Homolysine, oligosaccharide conjugates 505-66-8D, Homopiperazine, oligosaccharide conjugates 13184-13-9D, oligosaccharide conjugates 71292-18-7D, oligosaccharide conjugates 98603-84-0D, derivs. 141024-70-6D, derivs.
(selectin-binding, for pharmaceuticals)

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TSCA INFORMATION NOW CURRENT THROUGH MAY 1994

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=> d ide can l27 1-23

L27 ANSWER 1 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **141175-64-6** REGISTRY
CN **Ceramide, 1-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI)**
(CA INDEX NAME)
MF Unspecified ←
CI **MAN** ← manual registration
SR CA
LC STN Files: CA, TOXLIT

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2 REFERENCES IN FILE CA (1967 TO DATE) } These are some applicants' references

REFERENCE 1: P 116:228245

no others exist in Chem Abs

REFERENCE 2: P 116:228244

L27 ANSWER 2 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **141175-63-5** REGISTRY
CN **Ceramide, 1-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI)** (CA INDEX NAME)
MF Unspecified
CI **MAN**
SR CA
LC STN Files: CA, TOXLIT

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

REFERENCE 2: P 116:228244

L27 ANSWER 3 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **141175-62-4** REGISTRY
CN **Ceramide, 1-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]-(9CI)** (CA INDEX NAME)
MF Unspecified
CI **MAN**
SR CA
LC STN Files: CA, TOXLIT

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

REFERENCE 2: P 116:228244

L27 ANSWER 4 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **141175-61-3** REGISTRY
CN **Ceramide, 1-O-[O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.6)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI)** (CA INDEX NAME)
MF Unspecified

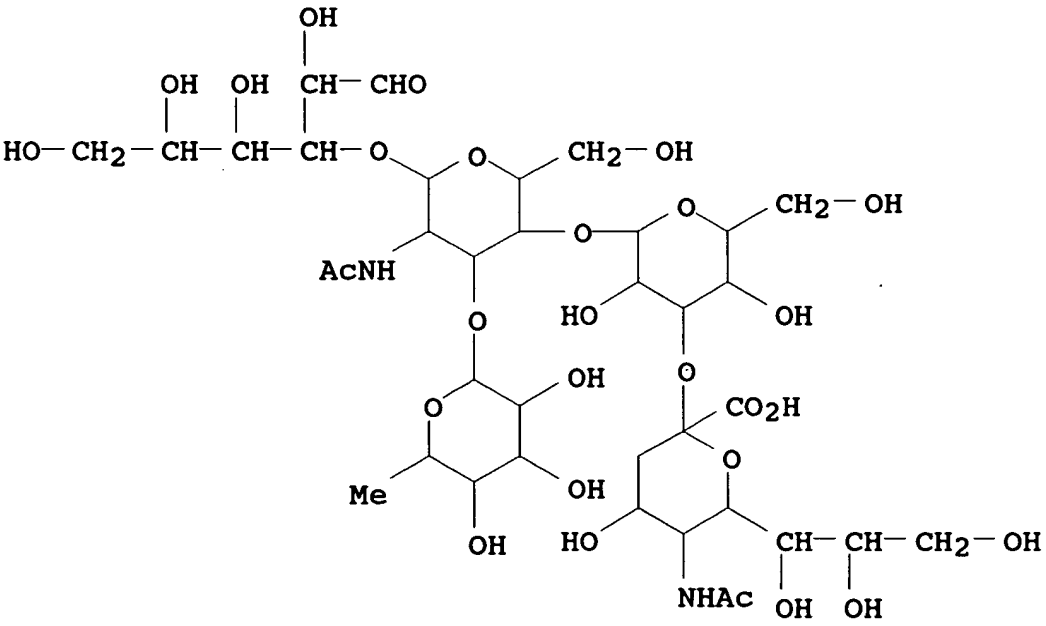
CI **MAN**
SR CA
LC STN Files: CA, TOXLIT

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

REFERENCE 2: P 116:228244

L27 ANSWER 5 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **141042-38-8** REGISTRY
CN **D-Mannose, O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.2)- (9CI)** (CA INDEX NAME)
MF C37 H62 N2 O28
SR CA
LC STN Files: CA, TOXLIT
DES *



1 REFERENCES IN FILE CA (1967 TO DATE)

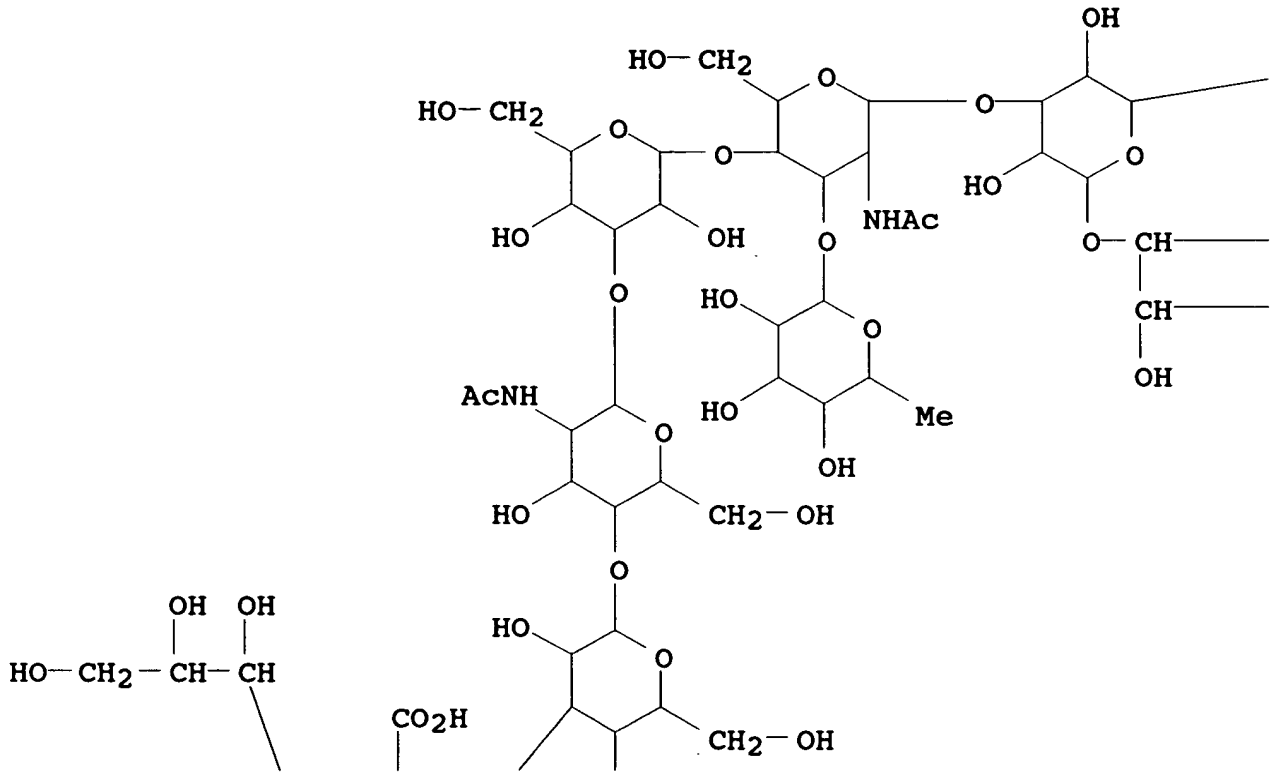
REFERENCE 1: P 116:228245

L27 ANSWER 6 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **141024-70-6** REGISTRY
CN D-Glucose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-

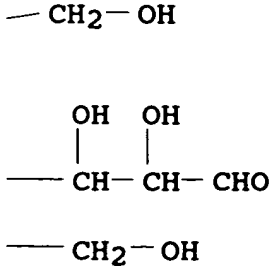
(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)- (9CI) (CA INDEX NAME)

MF C57 H95 N3 O44
SR CA
LC STN Files: CA, TOXLIT
DES *

PAGE 1-A



PAGE 1-B



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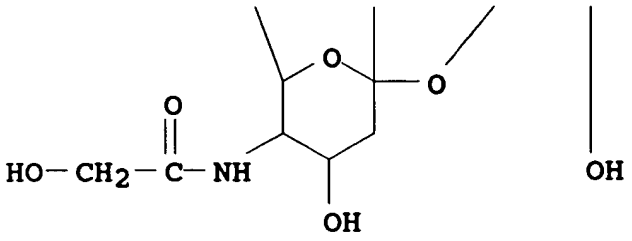
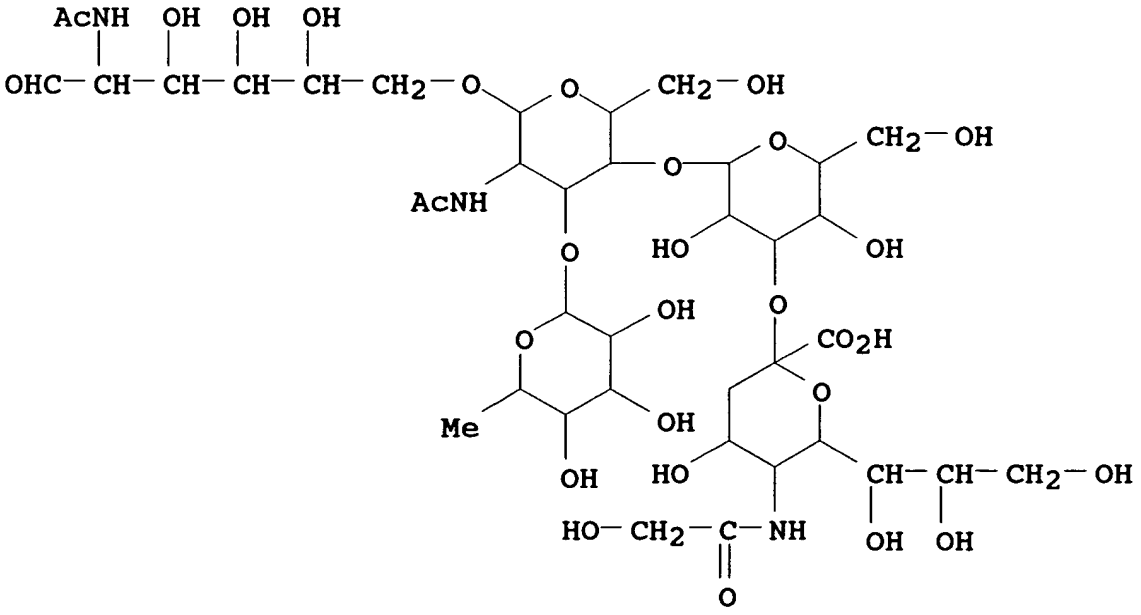


1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

REFERENCE 1: P 116:228244

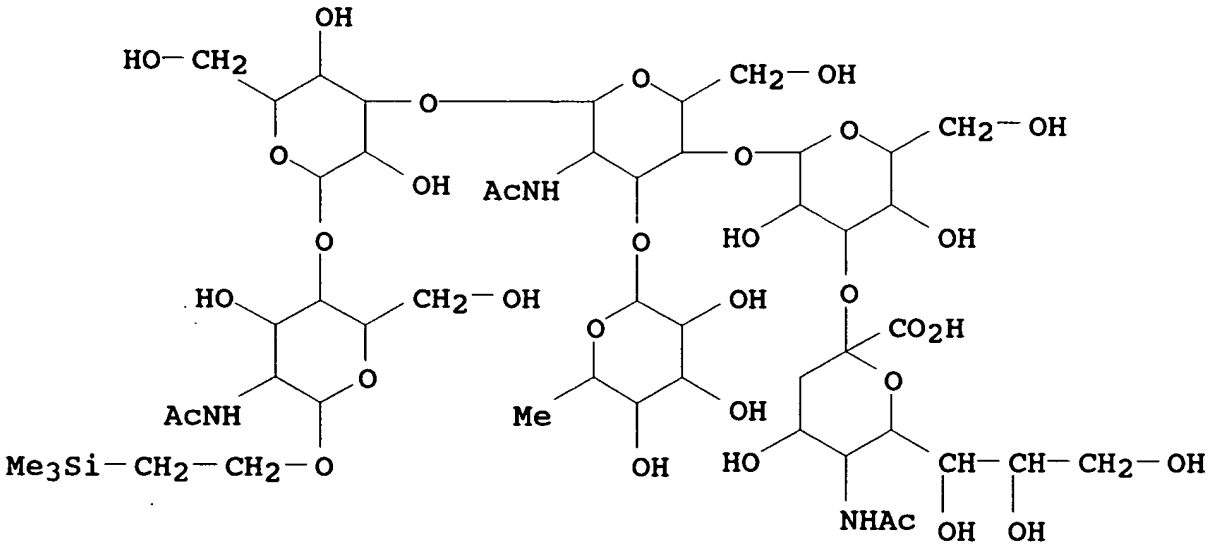
L27 ANSWER 7 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **141024-33-1** REGISTRY
CN **D-Galactose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.6)-2-(acetylamino)-2-deoxy- (9CI)** (CA INDEX NAME)
MF C39 H65 N3 O29
SR CA
LC STN Files: CA, TOXLIT
DES *



1 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

L27 ANSWER 8 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140938-81-4** REGISTRY
CN **.beta.-D-Glucopyranoside, 2-(trimethylsilyl)ethyl O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-2-(acetylamino)-2-deoxy- (9CI)** (CA INDEX NAME)
DR 140936-85-2
MF C50 H87 N3 O33 Si
SR CA
LC STN Files: CA, TOXLIT
DES *



2 REFERENCES IN FILE CA (1967 TO DATE)

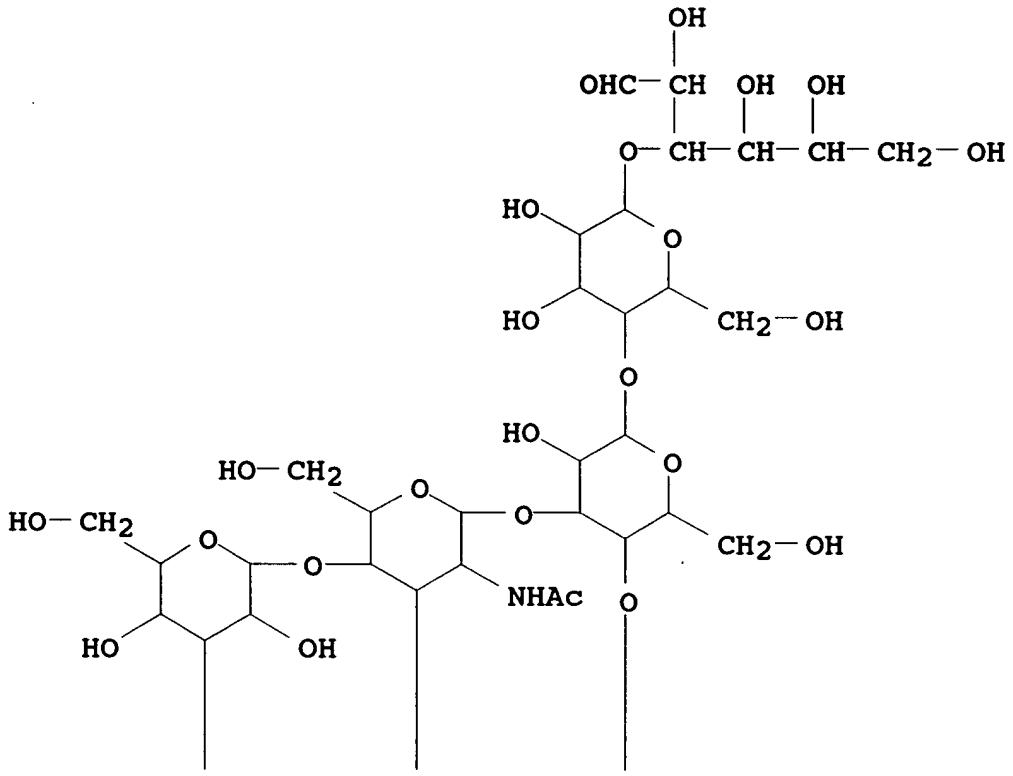
REFERENCE 1: P 116:228245

REFERENCE 2: P 116:228244

L27 ANSWER 9 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140936-84-1** REGISTRY
CN **D-Glucose, O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-[.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-.beta.-D-galactopyranosyl-(1.fwdarw.3)- (9CI)** (CA INDEX NAME)

MF C55 H92 N2 O43
SR CA
LC STN Files: CA, TOXLIT
DES *

PAGE 1-A



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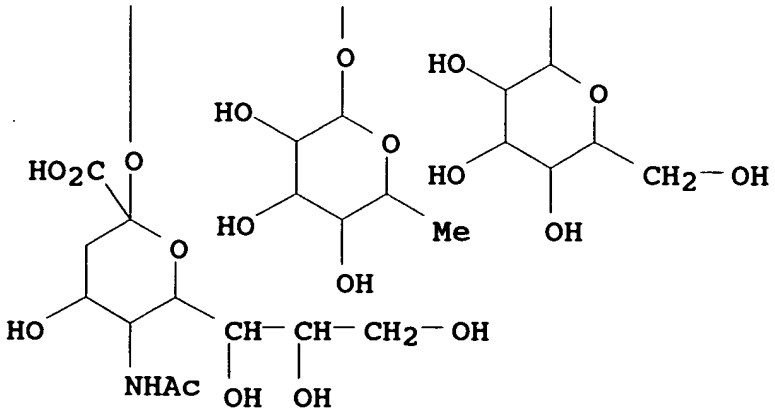
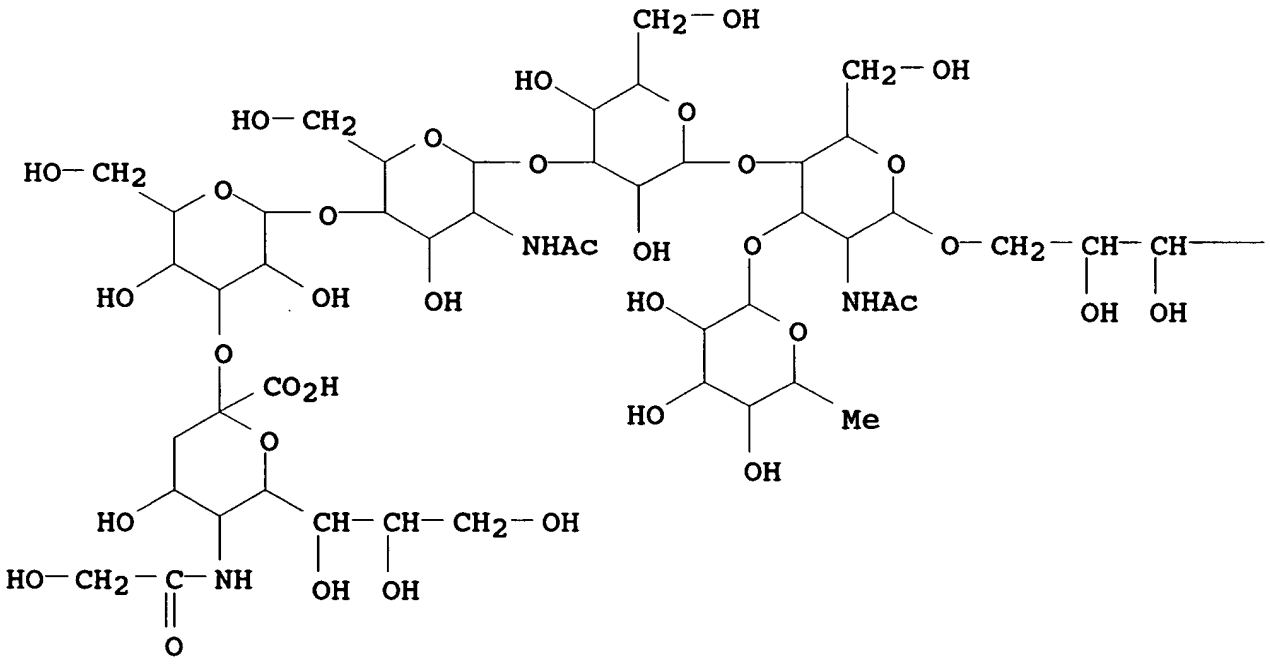


1 REFERENCES IN FILE CA (1967 TO DATE)

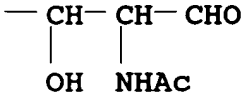
REFERENCE 1: P 116:228245

L27 ANSWER 10 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-70-8** REGISTRY
CN **D-Galactose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.6)-2-(acetylamino)-2-deoxy- (9CI)** (CA INDEX NAME)
MF C53 H88 N4 O39
SR CA
LC STN Files: CA, TOXLIT
DES *

PAGE 1-A



PAGE 1-B

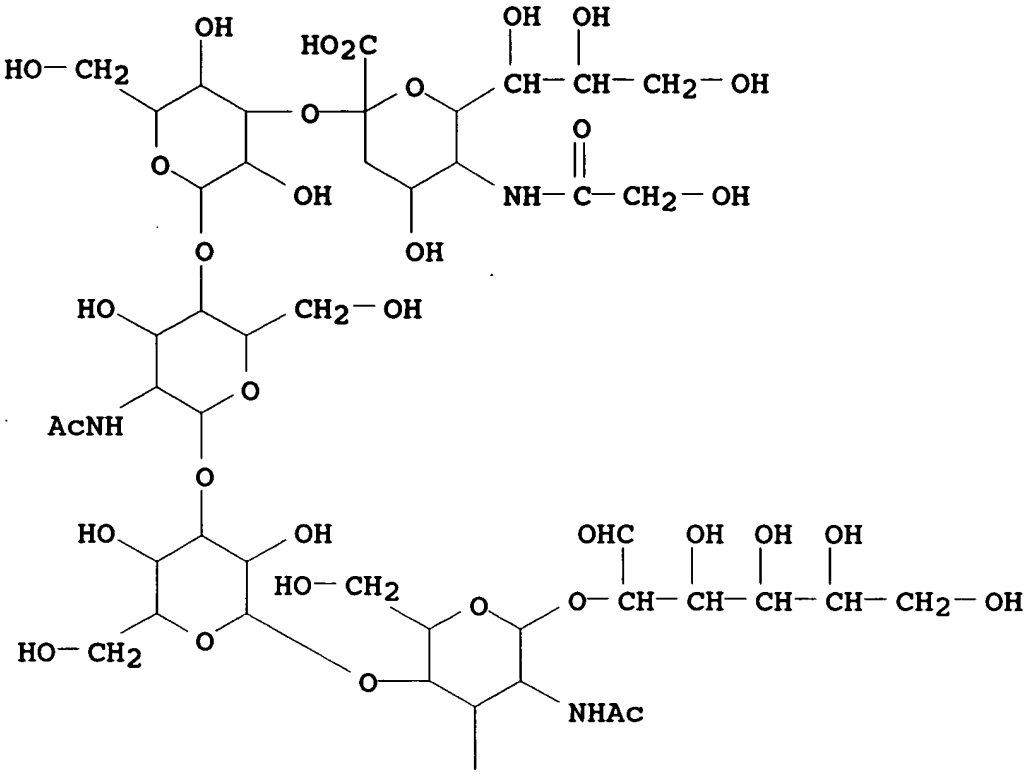


1 REFERENCES IN FILE CA (1967 TO DATE)

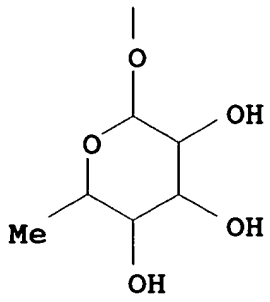
REFERENCE 1: P 116:228245

L27 ANSWER 11 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-69-5** REGISTRY
CN **D-Mannose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.2)-(9CI)** (CA INDEX NAME)
MF C51 H85 N3 O39
SR CA
LC STN Files: CA, TOXLIT
DES *

PAGE 1-A



PAGE 2-A



1 REFERENCES IN FILE CA (1967 TO DATE)

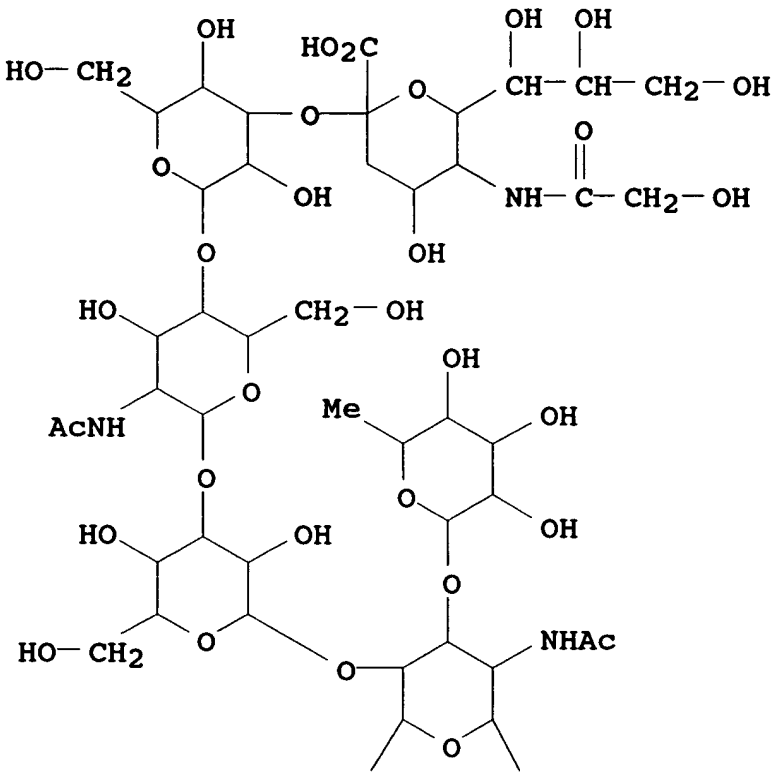
REFERENCE 1: P 116:228245

L27 ANSWER 12 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-68-4** REGISTRY
CN **D-Galactose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-**

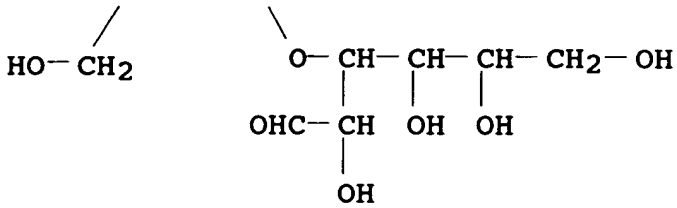
O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-
(9CI) (CA INDEX NAME)

MF C51 H85 N3 O39
SR CA
LC STN Files: CA, TOXLIT
DES *

PAGE 1-A



PAGE 2-A

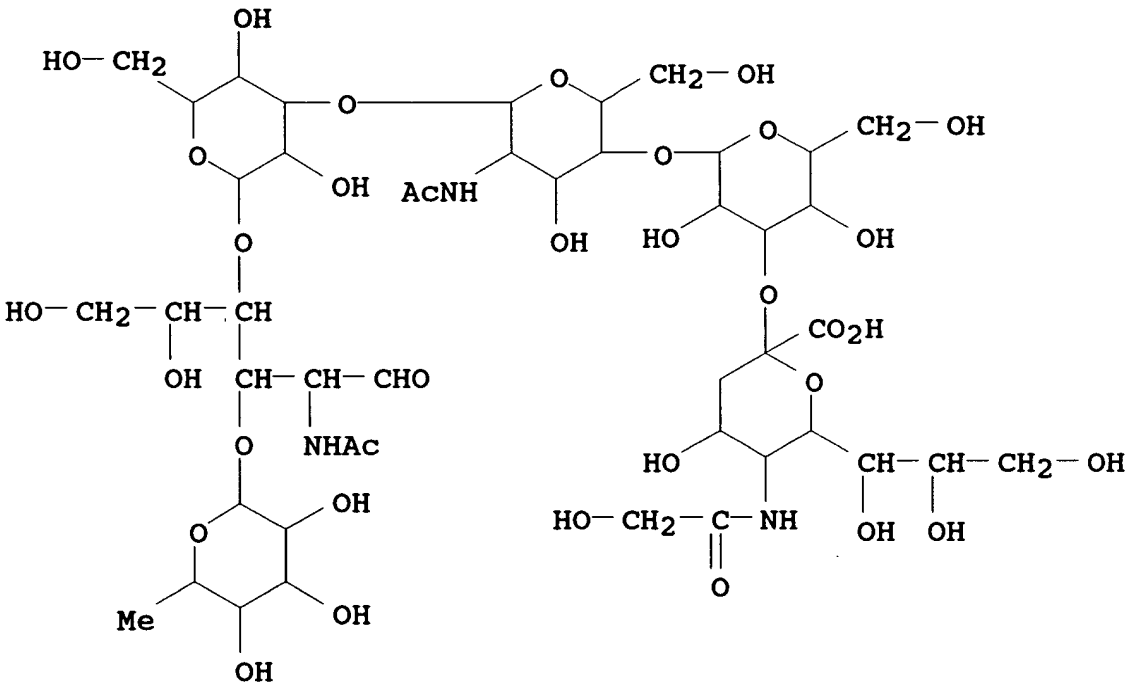


1 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

L27 ANSWER 13 OF 23 REGISTRY COPYRIGHT 1995 ACS

RN **140913-67-3** REGISTRY
CN D-Glucose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-2-(acetylamino)-2-deoxy- (9CI) (CA INDEX NAME)
MF C45 H75 N3 O34
SR CA
LC STN Files: CA, TOXLIT
DES *



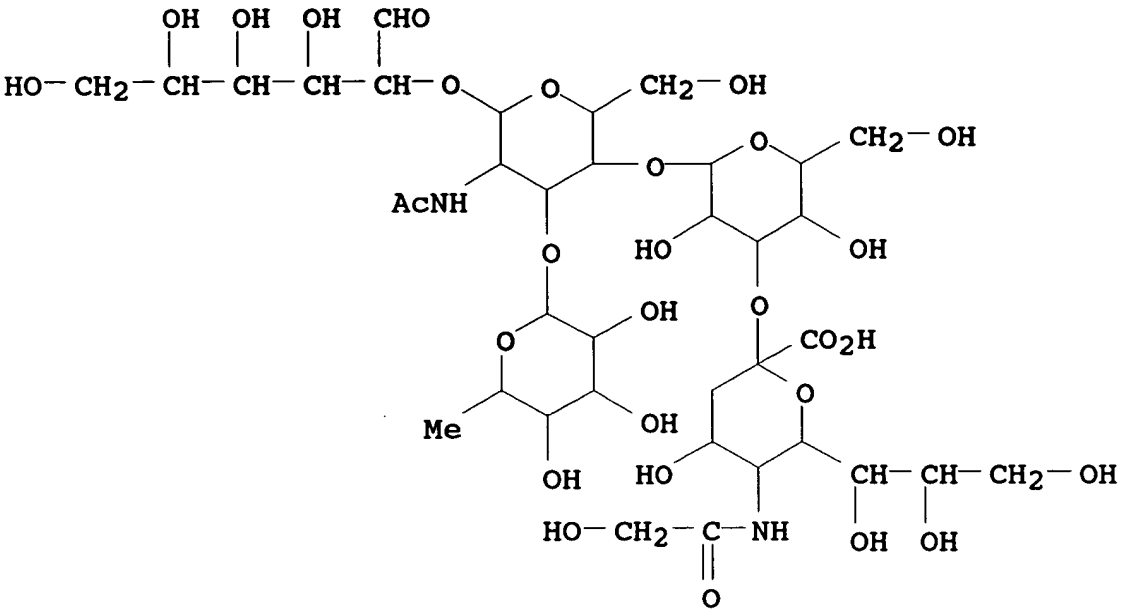
1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

REFERENCE 1: P 116:228245

REFERENCE 2: P 116:228244

L27 ANSWER 14 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-66-2** REGISTRY
CN **D-Mannose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.2)- (9CI)** (CA INDEX NAME)
MF C37 H62 N2 O29
SR CA
LC STN Files: CA, TOXLIT

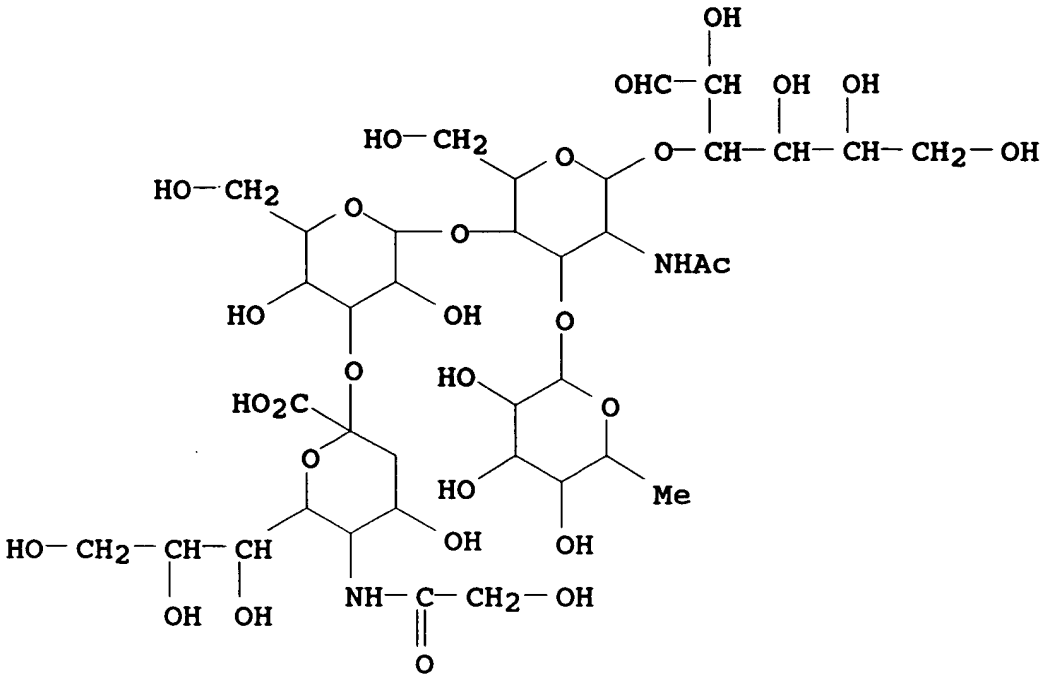
DES *



1 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

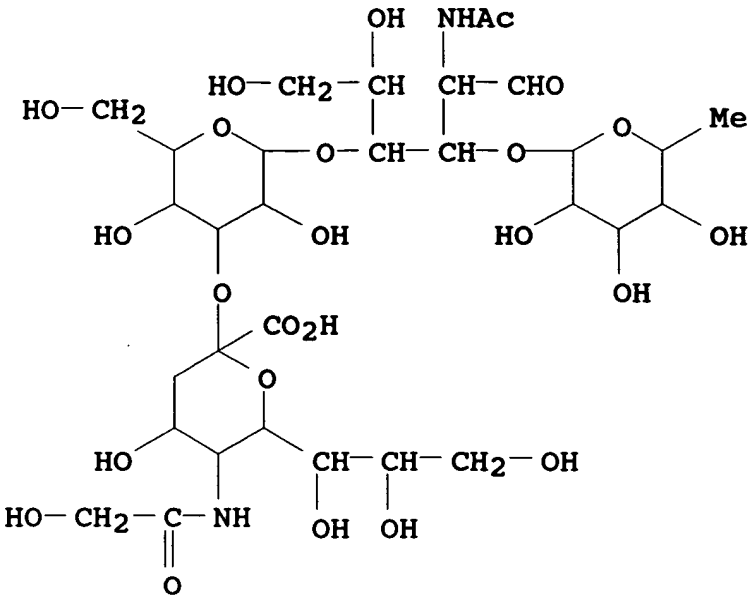
L27 ANSWER 15 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-65-1** REGISTRY
CN **D-Galactose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)- (9CI)** (CA INDEX NAME)
MF C37 H62 N2 O29
SR CA
LC STN Files: CA, TOXLIT
DES *



1 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

L27 ANSWER 16 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-64-0** REGISTRY
CN D-Glucose, O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-[N-(hydroxyacetyl)-.alpha.-neuraminosyl]-(2.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-2-(acetylamino)-2-deoxy- (9CI) (CA INDEX NAME)
MF C31 H52 N2 O24
SR CA
LC STN Files: CA, TOXLIT
DES *

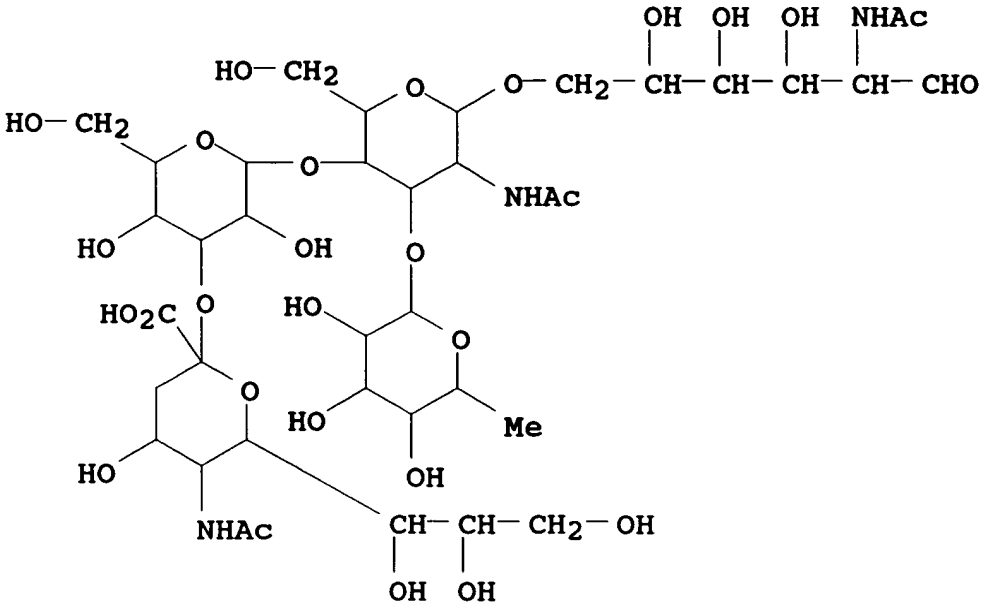


1 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

REFERENCE 1: P 116:228245

REFERENCE 2: P 116:228244

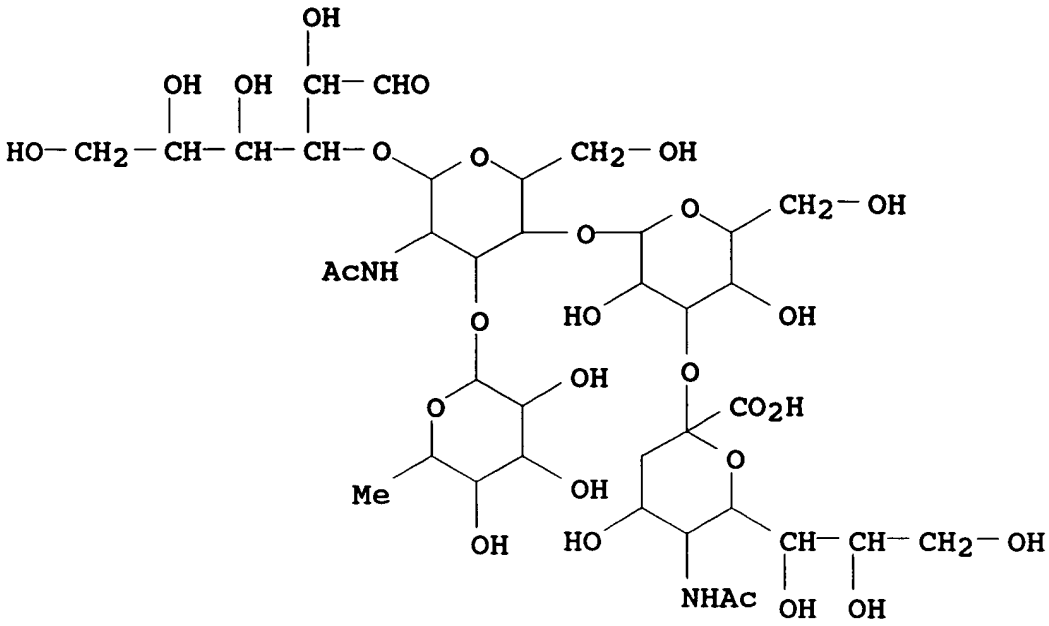
L27 ANSWER 17 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-63-9** REGISTRY
CN **D-Galactose, O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.6)-2-(acetylamino)-2-deoxy- (9CI)** (CA INDEX NAME)
MF C39 H65 N3 O28
SR CA
LC STN Files: CA, TOXLIT
DES *



1 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 116:228245

L27 ANSWER 18 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **140913-62-8** REGISTRY
CN **D-Galactose, O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)- (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Sialyl Lex tetra
MF C37 H62 N2 O28
SR CA
LC STN Files: CA, TOXLIT
DES *

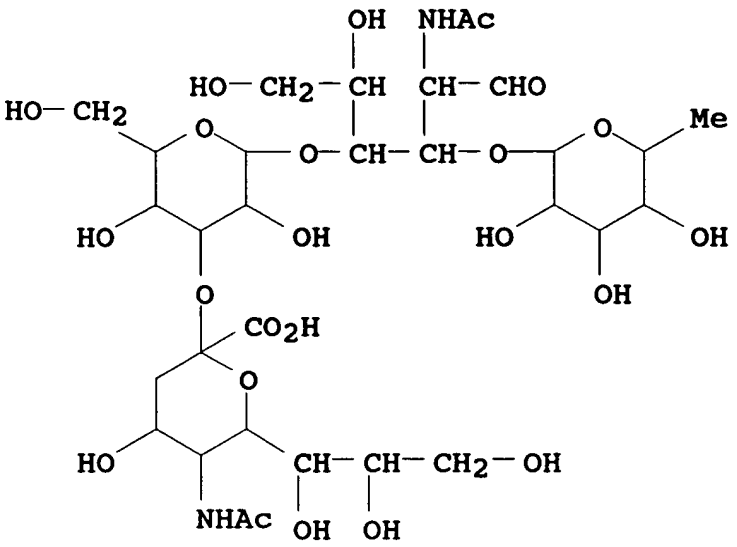


2 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: 120:131691 ← not applicant

REFERENCE 2: P 116:228245

L27 ANSWER 19 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **98603-84-0** REGISTRY
CN D-Glucose, O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-2-(acetylamino)-2-deoxy- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 3'-Sialyl-Lewis X
CN Sialyl Lex tri
CN Sialyl-Lewis X
CN SLex
CN SSEA 1
DR 149655-51-6
MF C31 H52 N2 O23
SR CA
LC STN Files: BIOBUSINESS, BIOSIS, CA, CIN, CJACS, PNI, PROMT, TOXLIT, USPATFULL
DES *



35 REFERENCES IN FILE CA (1967 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

REFERENCE 1: 122:7681

REFERENCE 2: P 121:286569

REFERENCE 3: 121:256197

REFERENCE 4: 121:252813

REFERENCE 5: 121:248964

REFERENCE 6: 121:224599

REFERENCE 7: P 121:205891

REFERENCE 8: 121:177090

REFERENCE 9: P 121:155760

REFERENCE 10: 121:155086

L27 ANSWER 20 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **96119-72-1** REGISTRY
CN **Ceramide, 1-O-[O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Rauvala's ganglioside
CN sLex-hexa-Cer
MF Unspecified

CI **MAN**
LC STN Files: CA, TOXLIT, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
18 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: 121:248964

REFERENCE 2: 120:296273

REFERENCE 3: 120:160638

REFERENCE 4: 118:250375

REFERENCE 5: 118:210917

REFERENCE 6: 117:46258

REFERENCE 7: 116:232899

REFERENCE 8: P 116:228245

REFERENCE 9: P 116:228244

REFERENCE 10: P 116:19655

L27 ANSWER 21 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **92480-43-8** REGISTRY
CN **Ceramide, 1-O-[O-(N-acetyl-.alpha.-neuraminosyl)-(2.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-O-[6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI)** (CA INDEX NAME)
OTHER NAMES:
CN Ganglioside 6B
DR 110908-56-0, 98444-40-7
MF Unspecified
CI **MAN**
LC STN Files: CA, TOXLIT, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
12 REFERENCES IN FILE CA (1967 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

REFERENCE 1: 120:296273

REFERENCE 2: 118:250375

REFERENCE 3: 116:232899

REFERENCE 4: P 116:228245

REFERENCE 5: P 116:228244

REFERENCE 6: P 116:19655

REFERENCE 7: 113:38600

REFERENCE 8: 109:209283

REFERENCE 9: P 108:203181

REFERENCE 10: 107:74891

L27 ANSWER 22 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **90327-80-3** REGISTRY
CN **Ceramide, 1-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI)** (CA INDEX NAME)
DR 129651-44-1
MF Unspecified
CI **MAN**
LC STN Files: CA, CANCERLIT, MEDLINE, TOXLIT, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
22 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: 120:160638

REFERENCE 2: 118:250375

REFERENCE 3: P 116:228245

REFERENCE 4: P 116:228244

REFERENCE 5: P 115:68038

REFERENCE 6: 114:40168

REFERENCE 7: 113:149619

REFERENCE 8: P 113:22070

REFERENCE 9: 112:115640

REFERENCE 10: 112:53345

L27 ANSWER 23 OF 23 REGISTRY COPYRIGHT 1995 ACS
RN **73201-40-8** REGISTRY
CN **Ceramide, 1-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-**

(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI)
(CA INDEX NAME)
OTHER NAMES:
CN **III3-.alpha.-Fucosylneolactotetraosylceramide**
MF Unspecified
CI **MAN**
LC STN Files: CA, CJACS, TOXLIT, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
44 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: 120:160638

REFERENCE 2: 119:247522

REFERENCE 3: 118:250375

REFERENCE 4: 117:24408

REFERENCE 5: 116:232899

REFERENCE 6: P 116:228245

REFERENCE 7: P 116:228244

REFERENCE 8: 116:18182

REFERENCE 9: 115:112339

REFERENCE 10: 114:60083

=>
=>
=> d his l28-

(FILE 'HCAOLD' ENTERED AT 08:16:49 ON 09 FEB 95)
L28 0 S L27

FILE 'HCAPREVIEWS' ENTERED AT 08:16:57 ON 09 FEB 95
L29 0 S L27 OR L27/D

FILE 'HCA' ENTERED AT 08:17:09 ON 09 FEB 95 ← all references for compds 1-33 set L27

L30 109 S L27 OR L27/D
L31 26851 S INFLAMMATION INHIBITOR# OR ANTIINFLAMMAT? OR ANTI INFLA
L32 1308 S RESPIRATORY DISTRESS SYNDROME
L33 2637 S SEPSIS OR SEPTICEMIA
L34 1396 S NEOPLASM INHIBITOR# (L) METASTASIS
L35 2428 S SHOCK (L) (SEPTIC OR ENDOTOXIN#)
L36 949 S SHOCK (L) TOXIN# (L) ENDO
L37 18344 S LIPOSOME#
L38 12 S L30 AND (L31 OR L32 OR L33 OR L34 OR L35 OR L36 OR L37)
L39 10 S L38 NOT L14 ← exclude applicant

utility

FILE 'REGISTRY' ENTERED AT 08:24:13 ON 09 FEB 95

=>
=>
=> fil hca
FILE 'HCA' ENTERED AT 08:25:38 ON 09 FEB 95
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FILE COVERS 1967 - 4 Feb 1995 (950204/ED) VOL 122 ISS 6

HCAPLUS IS NOW ONLINE! SEE NEWS FOR DETAILS
'OBI' IS DEFAULT SEARCH FIELD FOR 'HCA' FILE

=> d l39 1-10 all

L39 ANSWER 1 OF 10 HCA COPYRIGHT 1995 ACS
AN 121:286569 HCA
TI New carbohydrate-based **anti-inflammatory** agents
IN Brandley, Brian K.; Tiemeyer, Michael; Swiedler, Stuart J.; Moreland, Margaret; Schweingruber, Hans; Rao, Narasinga
PA Glycomed Inc., USA
SO Can. Pat. Appl., 70 pp.
CODEN: CPXXEB
PI CA 2100600 AA 940131
AI CA 93-2100600 930715
PRAI US 92-922328 920730
DT Patent
LA English
IC C07K015-00; C07H015-04; A61K031-715
CC 63-3 (Pharmaceuticals)
OS MARPAT 121:286569
AB Tetrasaccharide ligands (I and compds. with equiv. H-bond donor groups) that bind to human selectin receptors are disclosed. The ligands are formulated with excipient carriers to form compns. which are administered to treat conditions such as inflammation. The ligands were sepd. from sapond. neutrophil glycolipids by DEAE-Sepharose Fast Flow column chromatog. and screened for binding to COS cells transfected with recombinant ELAM-1 cDNA.
ST carbohydrate ELAM ligand **inflammation inhibitor**; selectin receptor ligand **inflammation inhibitor**
IT Leukocyte
Neutrophil
(ELAM-1-binding carbohydrate ligand of glycolipids of, of human, as **inflammation inhibitor**)
IT Glycolipids
(ELAM-1-binding carbohydrate ligand of, of leukocyte of human, as **inflammation inhibitor**)
IT **Inflammation inhibitors**
(carbohydrate ligands for selectin receptors)
IT Inflammation
(diagnosis of, labeled ELAM-1-binding carbohydrate ligand for)
IT Oligosaccharides
(ligands for selectin receptors, as **inflammation**

inhibitors)
IT Receptors
(E-selectin, carbohydrate ligands for, as **inflammation inhibitors**)
IT Glycophosphoproteins
(E-selectins, detection of, by specific binding assay, carbohydrate ligands for)
IT Glycophosphoproteins
(E-selectins, receptors, carbohydrate ligands for, as **inflammation inhibitors**)
IT Receptors
(selectin, carbohydrate ligands for, as **inflammation inhibitors**)
IT Glycoproteins, specific or class
(selectins, receptors, carbohydrate ligands for, as **inflammation inhibitors**)
IT **98603-84-0**
(as **inflammation inhibitor**)

L39 ANSWER 2 OF 10 HCA COPYRIGHT 1995 ACS
AN 121:155760 HCA
TI Glycoprotein ligand for P-selectin and methods of use thereof
IN Cummings, Richard D.; Moore, Kevin L.; Mcever, Rodger P.
PA University of Oklahoma, USA
SO PCT Int. Appl., 65 pp.
CODEN: PIXXD2
PI WO 9411498 A1 940526
DS W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN, MW, NO, NZ, PL, RO, RU, SD, SK, UA, US, VN
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
AI WO 93-US11129 931116
PRAI US 92-976552 921116
DT Patent
LA English
IC ICM C12N015-10
ICS C07K015-14; A61K037-02; A61K039-395; G01N033-68
CC 15-8 (Immunochemistry)
Section cross-reference(s): 1
AB P-selectin has been demonstrated to bind primarily to a single glycoprotein ligand on neutrophils and HL-60 cells, when assessed by blotting assays and by affinity chromatog. of [3H]glucosamine-labeled HL-60 cell exts. on immobilized P-selectin. This mol. was characterized and distinguished from other well-characterized neutrophil membrane proteins with similar apparent mol. mass. The purified ligand, or fragments thereof, including both the carbohydrate and protein components, or antibodies to the ligand, or fragments or components thereof, can be used as inhibitors of binding of P-selectin to cells. The P-selectin ligand and antibody to the ligand or polypeptide of the ligand are useful for modulating inflammatory or hemostatic response, or for inhibiting tumor metastasis.
ST glycoprotein ligand P selectin; antibody P selectin glycoprotein ligand; inflammation antibody P selectin ligand glycoprotein

IT Oligosaccharides
(N- or O- or Ser/Thr-linked, glycoprotein ligand for P-selectin contg.)
IT Deoxyribonucleic acids
Nucleic acids
(P-selectin glycoprotein ligand-encoding, screening of, method for)
IT Leukocyte
(binding of, inhibition of, antibody and glycoprotein ligand for P-selectin for)
IT Ligands
(for P-selectin, characterization and purifn. and use of)
IT Chelating agents
(for calcium, as eluent for sepn. of glycoprotein ligand for P-selectin)
IT Glycoproteins, compounds
(ligand for P-selectin, characterization and purifn. and use of)
IT Neutrophil
(membrane of, sepn. of glycoprotein ligand for P-selectin from)
IT Circulation
Inflammation
(modulation of, antibody to glycoprotein ligand for P-selectin for)
IT Sialic acids
(removal of, from glycoprotein ligand for P-selectin, by sialidase, for characterization)
IT Antibodies
(to glycoprotein ligand for P-selectin, for modulating inflammatory or hemostatic response or treating tumor metastasis)
IT Enzymes
(treatment, for characterization of glycoprotein ligand for P-selectin)
IT Receptors
(P-selectins, glycoprotein ligand for, characterization and purifn. and use of)
IT Mucopolysaccharides, compounds
(lactosaminoglycans, polyfucosylated poly-, glycoprotein ligand of P-selectin contg. moiety of)
IT **Neoplasm inhibitors**
(**metastasis**, antibody and glycoprotein ligand for P-selectin as)
IT Hematopoietic precursor cell
(myeloid, membrane of, sepn. of glycoprotein ligand for P-selectin from)
IT 60-00-4, EDTA, uses 7512-17-6, Acetylglucosamine 7647-14-5, Sodium chloride, uses
(as eluent for sepn. of glycoprotein ligand for P-selectin)
IT 7440-70-2, Calcium, biological studies
(chelating agent for, for sepn. of glycoprotein ligand for P-selectin)
IT 157381-94-7 157381-95-8
(glycoprotein ligand of P-selectin contg.)
IT 3416-24-8, Glucosamine 5143-15-7 7535-00-4, Galactosamine 82441-98-3, Poly-N-acetyllactosamine **98603-84-0D**,

Sialyl-Lewis X, difucosyl 136514-66-4
(glycoprotein ligand of P-selectin contg. moiety of)
IT 157351-83-2, Mono-Q PC
(sepn. of glycoprotein ligand for P-selectin through column contg.)
IT 9001-67-6, Neuraminidase
(treatment with, for characterization of glycoprotein ligand for P-selectin)

L39 ANSWER 3 OF 10 HCA COPYRIGHT 1995 ACS
AN 121:148348 HCA
TI Sialyl Lewis X mimics derived from a pharmacophore search are selectin inhibitors with **anti-inflammatory** activity
AU Rao, B. N. Narasinga; Anderson, Mark B.; Musser, John H.; Gilbert, James H.; Schaefer, Mary E.; Foxall, Carrol; Brandley, Brian K.
CS Glycomed Inc., Alameda, CA, 94501, USA
SO J. Biol. Chem. (1994), 269(31), 19663-6
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
CC 1-3 (Pharmacology)
AB The selectins, a family of adhesion receptors involved in leukocyte extravasation, recognize sialyl Lewis X (sLex; NeuAc.alpha.2-3Gal.beta.1-4(Fuc.alpha.1-3)GlcNAc) and related oligosaccharides. The authors used conformational energy computations, high field NMR, and structure-function studies to define distance parameters of crit. functional groups of sLex. This sLex pharmacophore was used to search a three-dimensional data base of chem. structures. Compds. that had a similar spatial relation of functional groups were tested as inhibitors of selectin binding. Glycyrrhizin, a triterpene glycoside, was identified and found to block selectin binding to sLex in vitro. The authors substituted different sugars for the glucuronic acids of glycyrrhizin and found the L-fucose deriv. to be the most active in vitro and in vivo. A C-fucoside deriv., synthesized on a linker designed for stability and to more closely approx. the original sLex pharmacophore, resulted in an easily synthesized, effective selectin blocker with anti-inflammatory activity.
ST pharmacophore sialyl Lewis X mimic **antiinflammatory**; selectin binding inhibitor **antiinflammatory** structure activity
IT Pharmacophores
(for sialyl Lewis X mimics, **antiinflammatory** activity in relation to)
IT **Inflammation inhibitors**
(selectin inhibitors, structure-activity relations of, sialyl Lewis X mimic pharmacophores in relation to)
IT Molecular structure-biological activity relationship
(inflammation-inhibiting, of selectin binding inhibitors)
IT Glycoproteins, specific or class
(selectins, binding, inhibitors of, **antiinflammatory** activity of sialyl Lewis X mimic pharmacophores in relation to)
IT 1405-86-3, Glycyrrhizin 157499-68-8 157499-69-9

(**antiinflammatory** activity of, selectin binding inhibition in relation to)
IT **98603-84-0**, Sialyl Lewis X
(selectin binding to, inhibitors of, **antiinflammatory** activity in relation to)

L39 ANSWER 4 OF 10 HCA COPYRIGHT 1995 ACS
AN 121:33081 HCA
TI Inositol polyanions. Noncarbohydrate inhibitors of L- and P-selectin that block inflammation
AU Cecconi, Oliviero; Nelson, Richard M.; Roberts, W. Gregory; Hanasaki, Kohji; Mannori, Gianna; Schultz, Carsten; Ulich, Thomas R.; Aruffo, Alejandro; Bevilacqua, Michael P.
CS Howard Hughes Med. Inst., Univ. California, La Jolla, CA, 92093-0669, USA
SO J. Biol. Chem. (1994), 269(21), 15060-6
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
CC 15-10 (Immunochemistry)
Section cross-reference(s): 1, 13
AB Selectins are cell adhesion mols. known to support the initial attachment of leukocytes to inflamed vascular endothelium through their recognition of carbohydrate ligands such as the tetrasaccharide sialyl Lewisx (Neu5Ac.alpha.2-Gal.beta.1-4(Fuc.alpha.1-3)GlcNAc-). In the present study, the authors describe the inhibition of L- and P-selectin function by inositol polyanions, simple 6-carbon ring structures that have multiple ester-linked phosphate or sulfate groups. In a purified component competition assay, binding of L- and P-selectin-Ig fusion proteins to immobilized bovine serum albumin-sialyl Lewisx neoglycoprotein was inhibited by inositol hexakisphosphate (InsP6, IC50 = 2.1. .mu.M and 160 .mu.M), by inositol pentakisphosphate (InsP5, IC50 = 1.4 and 260 .mu.M), and by inositol hexakissulfate (InsS6, IC50 = 210 .mu.M and 2.8 mM); E-selectin-Ig binding was unaffected. Inositol polyanions diminished the adhesion of LS180 colon carcinoma cells to plates coated with L- and P-selectin-Ig but not with E-selectin-Ig. Inositol polyanions blocked polymorphonuclear leukocyte (PMN) adhesion to COS cells expressing recombinant transmembrane P-selectin but not to those expression E-selectin. In addn., inositol polyanions diminished PMN adhesion to activated endothelial cells under rotation-induced shear stress, a process known to require L-selectin function. In vivo, the effects of inositol polyanions were studied in two murine models of acute inflammation. InsP6 administered i.v. (two doses of 40 .mu.mol/kg) inhibited PMN accumulation in thioglycolate-induced inflammation (55% inhibition) and in zymosan-induced inflammation (61% inhibition). InsP5 and InsS6 also inhibited inflammation in these models, although higher doses were required for InS6. In conclusion, inositol polyanions are noncarbohydrate small mols. that inhibit L- and P-selectin function in vitro and inflammation in vivo.
ST selectin adhesion inositol polyanion; inflammation inhibition selectin inositol polyanion
IT **Inflammation inhibitors**

(inositol polyanions as)
IT Glycoproteins, specific or class
(L-selectins, adhesive and inflammatory roles for, inositol polyanions effect on)
IT Blood-group substances
(Lex, sialyl, determinant, L-selectin and P-selectin binding to, inositol polyanions inhibition of)
IT Glycoproteins, specific or class
(P-selectins, adhesive and inflammatory roles for, inositol polyanions effect on)
IT Adhesion
(bio-, L-selectin and P-selectin mediation of, inositol polyanions inhibition of)
IT Intestine, neoplasm
(colon, carcinoma, adhesion to L-selectin or P-selectin by human, inositol polyanions inhibition of)
IT Blood vessel
(endothelium, L-selectin-mediated adhesion of polymorphonuclear leukocyte to activated human, inositol polyanions inhibition of)
IT Leukocyte
(polymorphonuclear, adhesion by human, L-selectin or P-selectin mediation of, inositol polyanions inhibition of)
IT 83-86-3, D-myo-Inositol hexakis(dihydrogen phosphate) 20298-95-7, myo-Inositol 1,3,4,5,6-pentakis(dihydrogen phosphate) 23330-83-8 39907-99-8D, D-myo-Inositol, polyanions
(L-selectin and P-selectin adhesive and inflammatory functions inhibition by)
IT 2068-89-5, D-myo-Inositol 3,5,6-tris(dihydrogen phosphate) 85166-31-0, D-myo-Inositol 1,4,5-trisphosphate 92216-46-1
(L-selectin-mediated adhesion inhibition by)
IT **98603-84-0**
(as sialyl Lewisx determinant, L-selectin and P-selectin binding to, inositol polyanions inhibition of)

L39 ANSWER 5 OF 10 HCA COPYRIGHT 1995 ACS
AN 121:893 HCA
TI **Anti-inflammatory**, tolerogenic and immunostimulatory properties of carbohydrate binding-proteins
IN Smith, Richard; Heerze, Louis D.; Armstrong, Glen D.
PA Alberat Research Council, Can.
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
PI WO 9407516 A1 940414
DS W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, HU, JP, KP, KR, LK, LU, MG, MN, MW, NL, NO, PL, RO, RU, SD, SE, US
RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, DE, DK, ES, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG
AI WO 93-CA414 931004
PRAI US 92-956043 921002
DT Patent
LA English
IC ICM A61K037-02
ICS A61K037-54; A61K039-39
CC 1-7 (Pharmacology)

AB Methods are disclosed for suppressing inflammatory response, inducing tolerance to an antigen, stimulating immune response to antigens, and suppressing or enhancing cell adhesion e.g. involved in metastasis, by the administration of carbohydrate binding proteins of fragments or derivs. thereof, in particular proteins capable of binding .alpha.-2,6 sialic acid structures and/or .alpha.-2,3 sialic acid structures. Pharmaceutical compns. contg. the sialic acid binding proteins or fragments or derivs. thereof are also disclosed. Carbohydrate-binding specificities of pertussis toxin .beta. subunit, Sambucus nigra agglutinin, and Maackia amurensis agglutinin were detd. The effects of carbohydrate binding proteins on e.g. immune response induction and ELAM-1-dependent cell adhesion to activated vascular endothelium are also described.

ST carbohydrate binding protein immunomodulator **antiinflammatory; inflammation inhibitor** carbohydrate binding protein; metastasis inhibitor carbohydrate binding protein; immune tolerance carbohydrate binding protein

IT Maackia amurensis
(agglutinin of, carbohydrate-binding specificities of, carbohydrate binding proteins for immunomodulator and **anti-inflammatory** in relation to)

IT Immunomodulators
(carbohydrate binding proteins)

IT Immune tolerance
(carbohydrate binding proteins for induction of)

IT Allergy inhibitors
(carbohydrate binding proteins for, for delayed-type hypersensitivity)

IT Leukocyte
(carbohydrate binding proteins reactivity with carbohydrate binding domains of)

IT **Inflammation inhibitors**
(carbohydrate-binding proteins)

IT Injury
(from reperfusion, treatment of, carbohydrate-binding proteins for)

IT Allergens
Antigens
(modulation of immune response to, carbohydrate binding proteins for)

IT Agglutinins and Lectins
(of Sambucus nigra, as carbohydrate binding protein, for immunomodulator and **anti-inflammatory**)

IT Antigens
(CD19, carbohydrate binding proteins reactivity with leukocyte expressing)

IT Antigens
(CD2, carbohydrate binding proteins reactivity with leukocyte expressing)

IT Glycophosphoproteins
(E-selectins, carbohydrate binding proteins effect on cell adhesion dependent on, to activated vascular endothelium)

IT Blood-group substances
(Lea, sialyl, conjugates, with Synsorb, carbohydrate binding

protein inhibition by)
IT Elder
(S. nigra, agglutinin of, as carbohydrate binding protein, for immunomodulator and **anti-inflammatory**)
IT **Respiratory distress syndrome**
(adult, treatment of, carbohydrate binding proteins for)
IT Integrins
(antigens CD11b, carbohydrate binding proteins reactivity with leukocyte expressing)
IT Adhesion
(bio-, ELAM-1-dependent, carbohydrate binding proteins effect on, to activated vascular endothelium)
IT Proteins, specific or class
(carbohydrate-binding, as immunomodulators and **inflammation inhibitors**)
IT **Neoplasm inhibitors**
(colon carcinoma, **metastasis**, carbohydrate binding proteins)
IT Intestine, neoplasm
(colon, carcinoma, metastasis, inhibitors, carbohydrate binding proteins)
IT Blood vessel
(endothelium, carbohydrate binding proteins effect on ELAM-1-dependent cell adhesion to activated)
IT **Neoplasm inhibitors**
(melanoma, **metastasis**, carbohydrate binding proteins)
IT **Neoplasm inhibitors**
(**metastasis**, carbohydrate binding proteins)
IT Toxins
(pertussis, .beta. subunit of, as carbohydrate binding protein, for immunomodulator and **anti-inflammatory**)
IT Perfusion
(re-, injury due to, treatment of, carbohydrate binding proteins for)
IT **Shock**
(**septic**, treatment of, carbohydrate binding proteins for)
IT 9001-67-6, Neuraminidase 9001-67-6D, Neuraminidase, derivs. 9031-11-2, .beta.-Galactosidase 9031-11-2D, .beta.-Galactosidase, derivs. 9068-67-1, Sulfatase 9068-67-1D, Sulfatase, derivs. 111070-05-4, Fucosidase 111070-05-4D, Fucosidase, derivs.
(as carbohydrate binding protein, for immunomodulator and **anti-inflammatory**)
IT 83382-98-3D, Synsorb, sialyl Lewis A conjugates
(carbohydrate binding protein inhibition by)
IT 35259-23-5 83563-61-5
(carbohydrate structure contg., binding protein for, for immunomodulator and **anti-inflammatory**)
IT 78969-47-8 81693-22-3 92448-22-1 **98603-84-0** 133155-91-6 155602-51-0
(pertussis toxin .beta. subunit and agglutinin binding activity for, carbohydrate binding proteins for immunomodulator and **anti-inflammatory** in relation to)

L39 ANSWER 6 OF 10 HCA COPYRIGHT 1995 ACS
AN 120:52598 HCA
TI Heparin oligosaccharides bind L- and P-selectin and inhibit acute inflammation
AU Nelson, Richard M.; Cecconi, Oliviero; Roberts, W. Gregory; Aruffo, Alejandro; Linhardt, Robert J.; Bevilacqua, Michael P.
CS Howard Hughes Med. Inst., Univ. California, La Jolla, CA, USA
SO Blood (1993), 82(11), 3253-8
CODEN: BLOOAW; ISSN: 0006-4971
DT Journal
LA English
CC 15-10 (Immunochemistry)
Section cross-reference(s): 13
AB Initial attachment of leukocytes to the vessel wall at sites of inflammation is supported by a family of carbohydrate-binding adhesion mols. called the selectins. Selectin ligands include sialyl-Lewis x (sLex, Neu5Ac.alpha. 2-3Gal.beta.1-4[Fuc.alpha.1-3]GlcNAc-) and related structures. The authors report here that defined heparin oligosaccharides interact with the selectins. Heparin chains contg. four or more monosaccharide residues inhibited the function of L- and P-selectin, but not E-selectin, in vitro. In a competition ELISA measuring inhibition of sol .mu.mol/L and 850 .+-. 110 .mu.mol/L, resp. A single hexasulfated tetrasaccharide (.DELTA.UA2S.alpha.1-4GlcNS6S.alpha.1-4IdoA2S.alpha.1-4GlcNS6S) was particularly active against L- and P-selectin-Ig (IC50 = 46 .+-. 5 .mu.mol/L and 341 .mu.mol/L). By comparison, the tetrasaccharide sLex was not inhibitory at concns. up to 1 mmol/L. In cell adhesion assays, heparin tetrasaccharides reduced binding of neutrophils to COS cells expressing E-selectin. They also blocked colon cancer cell adhesion to L- and P-selectin but not E-selectin. In a model of acute inflammation, i.v. administered heparin tetrasaccharides diminished influx of neutrophils into the peritoneal cavities of thioglycollate-treated mice. The authors conclude that heparin oligosaccharides, including non-anticoagulant tetrasaccharides, are effective L- and P-selectin inhibitors in vitro and have anti-inflammatory activity in vivo.
ST heparin oligosaccharide selectin neutrophil
IT Neutrophil
(binding of, to selectin, heparan oligosaccharides inhibtion of)
IT **Inflammation inhibitors**
(heparan oligosaccharides as)
IT Oligosaccharides
(of heparin, selectins binding by and acute inflammation inhibition by)
IT Glycoproteins, specific or class
(L-selectins, heparin oligosaccharides binding to, acute inflammation inhibition by)
IT Glycoproteins, specific or class
(P-selectins, heparin oligosaccharides binding to, acute inflammation inhibition by)
IT Adhesion
(bio-, selectin-mediated, by neutrophils, heparan oligosaccharides inhibition of)
IT 53860-65-4 89847-99-4 **98603-84-0**

(of heparin, selectin-mediated functions inhibition by)
IT 9005-49-6, Heparin, biological studies
(oligosaccharides of, selectins binding by and acute inflammation inhibition by)

L39 ANSWER 7 OF 10 HCA COPYRIGHT 1995 ACS
AN 119:137234 HCA
TI Protective effects of sialylated oligosaccharides in immune complex-induced acute lung injury
AU Mulligan, Michael S.; Lowe, John B.; Larsen, Robert D.; Paulson, James; Zheng, Zhong Li; DeFrees, Shawn; Maemura, Kentaro; Fukuda, Minoru; Ward, Peter A.
CS Med. Sch., Univ. Michigan, Ann Arbor, MI, 48109, USA
SO J. Exp. Med. (1993), 178(2), 623-31
CODEN: JEMEAV; ISSN: 0022-1007
DT Journal
LA English
CC 15-8 (Immunochemistry)
Section cross-reference(s): 1
AB Using sialyl Lewisx (SLX) oligosaccharides derived from fucosyl transferase-expressing cells or generated synthetically, the ability of these compds. to protect against acute lung damage after deposition of IgG or IgA immune complexes was detd. The synthetic compds. were tetra- and pentasaccharide derivs. of SLX as well as the nonfucosylated forms of SLX as controls. In the IgG immune complex model of lung injury, which is E-selectin dependent, SLX prepns. provided dose-dependent protective effects, as assessed by changes in lung vascular permeability and hemorrhage. Protective effects were assocd. with diminished tissue accumulation of neutrophils in lungs (as assessed by myeloperoxidase). Morphol. assessment revealed reduced phys. contact of neutrophils with the pulmonary vascular endothelium and reduced tissue accumulation of neutrophils. In the model of IgA immune complex-induced lung injury, which does not involve participation of neutrophils and is independent of the requirement for E-selectin, SLX prepns. were not protective. Thus, in neutrophil-mediated and E-selectin-dependent lung injury, SLX prepns. provide significant, protective effects against inflammatory vascular injury. The ability to achieve antiinflammatory outcomes in vivo with appropriate oligosaccharides suggests a new approach to the blocking of acute inflammatory responses.
ST sialylated oligosaccharide immune complex lung injury; E selectin acute inflammation sialylated oligosaccharide
IT Lung, toxic chemical and physical damage
(IgG- and IgA-contg. immune complexes cytotoxicity to, sialylated oligosaccharides effect on)
IT Immune complexes
(IgG- and IgA-contg., acute lung injury induction by, sialylated oligosaccharides effect on)
IT Neutrophil
(accumulation of, in E-selectin-dependent lung injury, sialylated oligosaccharides effect on)
IT **Inflammation inhibitors**
(sialylated oligosaccharides in relation to)

IT Glycophosphoproteins
(E-selectins, IgG immune complex-induced lung injury dependent on, sialylated oligosaccharides effect on)
IT Blood-group substances
(Lex, neutrophil-mediated and E-selectin-dependent lung injury response to)
IT Blood-group substances
(Lex, sialyl, neutrophil-mediated and E-selectin-dependent lung injury response to)
IT 32181-59-2 71208-06-5 81693-22-3 **98603-84-0**
(neutrophil-mediated and E-selectin-dependent lung injury response to)

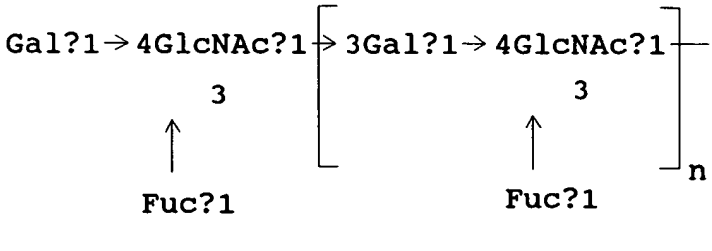
L39 ANSWER 8 OF 10 HCA COPYRIGHT 1995 ACS
AN 119:131270 HCA
TI Protective effects of oligosaccharides in P-selectin-dependent lung injury
AU Mulligan, Michael S.; Paulson, James C.; DeFrees, Shawn; Zheng, Zhong Li; Lowe, John B.; Ward, Peter A.
CS Med. Sch., Univ. Michigan, Ann Arbor, MI, 48109-0602, USA
SO Nature (London) (1993), 364(6433), 149-51
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English
CC 1-9 (Pharmacology)
AB Neutrophil recruitment into tissues is a multistep process involving sequential engagement of adhesion mols., including selectins (E,P,L), which are reactive with oligosaccharides, and the family of .beta.2 integrins which are reactive with endothelial intercellular adhesion mols. These processes result in the initial rolling of leukocytes along the endothelial surfaces, followed by the firm attachment of leukocytes to the endothelium. The i.v. infusion of cobra venom factor into rats results in acute lung injury that is neutrophil-dependent, oxygen radical mediated and P-selectin-dependent. Here the authors report that infusion of derivs. of sialyl-Lewis X, a ligand for P-selectin; dramatically reduced lung injury and diminished the tissue accumulation of neutrophils, whereas irrelevant oligosaccharides had no such effects. These results suggest that sialyl-Lewis X carbohydrates may be used as a new strategy for anti-inflammatory therapy.
ST oligosaccharide lung injury P selectin; sialyl Lewis X carbohydrate lung injury
IT Neutrophil
(accumulation of, in lung injury from P-selectin, sialyl-Lewis X carbohydrates antagonism of)
IT **Inflammation inhibitors**
(sialyl-Lewis X carbohydrates as, in lung injury from P-selectins)
IT Glycoproteins, specific or class
(P-selectins, lung injury from, sialyl-Lewis X carbohydrates antagonism of)
IT Lung, disease
(injury, from P-selectins, sialyl-Lewis X carbohydrates antagonism of, neutrophil accumulation in)

IT 149590-23-8 149590-24-9 **149655-51-6**
(lung injury from P-selectin inhibition by, neutrophil accumulation in)

L39 ANSWER 9 OF 10 HCA COPYRIGHT 1995 ACS
AN 112:115640 HCA
TI Specificity of glycosphingolipid recognition by Entamoeba histolytica trophozoites
AU Bailey, Gordon B.; Nudelman, Edward D.; Day, Diane B.; Harper, Coral F.; Gilmour, Jeffery R.
CS Dep. Biochem., Morehouse Sch. Med., Atlanta, GA, 30310, USA
SO Infect. Immun. (1990), 58(1), 43-7
CODEN: INFIBR; ISSN: 0019-9567
DT Journal
LA English
CC 10-6 (Microbial Biochemistry)
Section cross-reference(s): 14
AB The ability of purified glycosphingolipids to enhance liposome-stimulated E. histolytica actin polymn. was assessed as a means of defining the specificity of mammalian cell membrane lipid glycan recognition by this parasite. Synthetic liposomes contg. a variety of individual glycosphingolipids bearing neutral, straight-chain oligomeric glycans with galactose or N-acetylgalactosamine termini stimulated rapid (90-s) polymn. of ameba actin. Glycans with terminal N-acetylglucosamine residues were not stimulatory at all or were only weakly stimulatory. Glycans with glucose, N-acetylglucosamine, galactose, and N-acetylgalactosamine as the penultimate residue were recognized. Attachment of N-acetylneuraminate to the terminal residue of a stimulatory glycosphingolipid eliminated activity; attachment of fucose to the penultimate sugar reduced activity. Glycans with a terminal .beta.1-4 or 1-3 glycosidic bond were most effective; glycans with terminal .alpha.1-4 or 1-3 glycosides were less effective. The activity of glycans with both .beta.- and .alpha.-linked terminal glycosides was inhibited by lactose, suggesting recognition of both configurations by a single ameba protein. The ability of liposomes to stimulate actin polymn. reflected the extent of liposome phagocytosis.
ST glycosphingolipid receptor Entamoeba actin polymn; **liposome** glycan Entamoeba actin polymn
IT Entamoeba histolytica
(glycosphingolipid recognition by trophozoites of)
IT **Liposome**
(glycosphingolipids of, Entamoeba histolytica recognition of)
IT Receptors
(glycosphingolipids, for Entamoeba histolytica trophozoites)
IT Glycosphingolipids
(Entamoeba histolytica interaction with, specificity of)
IT Polysaccharides, biological studies
(Entamoeba histolytica recognition of, of **liposome** glycosphingolipids)
IT 4682-48-8 11034-93-8 56573-54-7 60267-39-2 71833-57-3
71965-57-6 72711-52-5 **73201-40-8** 73467-80-8
85305-87-9 85305-88-0 89678-50-2 **90327-80-3**

95536-66-6 97666-64-3
(Entamoeba histolytica interaction with)

L39 ANSWER 10 OF 10 HCA COPYRIGHT 1995 ACS
AN 109:66886 HCA
TI Antirheumatic glycolipids
IN Koshitomo, Takahiro
PA Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
PI JP 62273919 A2 871128 Showa
AI JP 86-116703 860521
DT Patent
LA Japanese
IC ICM A61K031-73
ICA C08B037-00
CC 1-7 (Pharmacology)
Section cross-reference(s): 63
GI



I

⟶3Gal?1→4Glc?1→1Cer

AB The glycolipids I (n = 1 or 2) are antirheumatics. Difucosyl neolactonolhexaoxyl ceramide (n = 1) was mixed with an EtOH soln. of lecithin and cholesterol, and the mixt. was poured into a stirring phosphate-buffered saline at 50.degree.. The product was dialyzed, filtered, and filled into vials. The product was adminstered s.c. to 8 rheumatoid arthritis patients. The conditions were markedly improved.
ST antirheumatic glycolipid; fucosyl neolactonolhexaoxyl ceramide antirheumatic
IT **Inflammation inhibitors**
(antirheumatics, di- or trifucosyl neolactonolhexaoxyl ceramide as)
IT 90327-79-0
(antirheumatic activity of)
IT **90327-80-3**
(antirheumatic pharmaceuticals contg.)

=> fil reg
FILE 'REGISTRY' ENTERED AT 08:27:28 ON 09 FEB 95

STRUCTURE FILE UPDATES: 3 FEB 95 HIGHEST RN 160636-16-8
DICTIONARY FILE UPDATES: 8 FEB 95 HIGHEST RN 160636-16-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 1994

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L40 1 SEA FILE=REGISTRY 90327-79-0 ← from last reference

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=> d ide can

L40 ANSWER 1 OF 1 REGISTRY COPYRIGHT 1995 ACS
RN **90327-79-0** REGISTRY
CN Ceramide, 1-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[O-6-deoxy-.alpha.-L-galactopyranosyl-(1.fwdarw.3)-O-[.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-.beta.-D-galactopyranosyl-(1.fwdarw.4)]-O-2-(acetylamino)-2-deoxy-.beta.-D-glucopyranosyl-(1.fwdarw.3)-O-.beta.-D-galactopyranosyl-(1.fwdarw.4)-.beta.-D-glucopyranosyl]- (9CI) (CA INDEX NAME)
DR 100469-68-9
MF Unspecified ←
CI MAN
LC STN Files: CA, TOXLIT, USPATFULL ←

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
9 REFERENCES IN FILE CA (1967 TO DATE)

REFERENCE 1: P 115:68038

REFERENCE 2: P 113:22070

REFERENCE 3: 112:139702

REFERENCE 4: 109:209490

REFERENCE 5: P 109:66886

REFERENCE 6: P 104:86980

REFERENCE 7: 103:69155

REFERENCE 8: 101:4851

REFERENCE 9: 100:207631